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THE 1987 HANOVER OPEN SPACE PLAN UPDATE

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Prepared by the  
Metropolitan Area Planning Council  
for the  
Town of Hanover

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## I. OPEN SPACE PLANNING AND RESOURCE PROTECTION IN THE TOWN OF HANOVER

### A. Past Planning

The Town of Hanover's first open space plan was prepared in 1979 under the direction of the Hanover Conservation Commission. The plan resulted from the Town's participation in the Soil Conservation Service's Natural Resources Planning Program that ended in 1980. A number of town boards and organizations contributed to the effort by providing information, reviewing data, and assisting in the development of the plan's goals and objectives. At that time, the Town of Hanover realized the need to address concerns of growth and to develop a program for preserving open space as part of an overall growth management strategy. Specific recommendations in the plan included prioritized lists of parcels for possible acquisition by the Town and site specific improvements for existing Town-owned properties; and a set of land use controls to be instituted. The plan also presented an overall strategy for open space preservation that encouraged town board cooperation and public education as the central means to implement specific elements of the plan.

### B. Current Planning Efforts

Since 1979, pressure for development has increased steadily in the Town of Hanover and the South Shore region. Hanover's Conservation Commission has continued in its effort to protect open space in the Town and to acquire property when possible. Although Town appropriations for the Commission's expense budget have continued to drop since 1979, town allocations to employ a Conservation Agent and clerical support have almost tripled. Overall, the Town appears to uphold its continued support for the Conservation Commission's mandate and activities.

As part of Hanover's continued effort to preserve open space in the community, the Town contracted with the Metropolitan Area Planning Council (MAPC) to update its open space plan, utilizing MAPC's program of Local Technical Assistance. Funding to update the plan was appropriated in part by the Hanover Planning Board and the Conservation Commission, and was supplemented by a grant from the Plymouth County Conservation District. Hanover's Growth Policy Committee played a key role in refining the goals and objectives of the original plan and serving as a liaison to seek out the needs and concerns expressed by other boards and organizations. The Conservation Agent and Town Planner also provided invaluable assistance.

The Town made the decision to focus on resource protection and passive recreation in this plan update; therefore, no information on active recreation has been included. This plan updates only those sections of the previous plan where significant changes have occurred. Greater detail on Hanover's physical and man-made environment, and settlement and history, can be found in the 1979 Open Space Plan.

### C. Acquisition of Parcels by the Conservation Commission

Nine parcels, totaling 71.55 acres of land, have been acquired by the Hanover Conservation Commission since 1979, with a majority of the property being wetlands. Most areas serve a resource protection function, although the Tindale Bog addition allows for skating on the pond, and the Indianhead River parcel and Old Pond Swamp provide fishing sites. Seven of the parcels lie in districts zoned for residential use with Old Pond Swamp (the largest in acreage of the nine parcels) located in a Limited Industrial Zone and the Fairbairn property located in a Commercial Zone. Four of the nine parcels, totaling 35.85 acres, were donated to the Conservation Commission by area landowners. These parcels are: Bonney/Henderson, Church/Hanson, Fairbairn, and Folly Hill. The Commission expended approximately \$5,500 to obtain the Indianhead River parcel, the Tindale Bog addition, Riverside, and the Old Pond Swamp properties. The Old Pond Swamp parcel, purchased with the use of a State Division of Conservation Services Self-Help Grant of \$12,000, consists of 30.5 acres located in the Aquifer Protection District. The grant covered 80% of the purchase cost. However, given the dwindling availability of funds for land acquisition, the Conservation Commission continues to look more and more toward local land donations as a means of acquiring properties for open space preservation and recreation.

### D. Protection of Natural Resources through the Establishment of ByLaws and Regulations

The Conservation Commission's most important achievement over the last eight years has been the establishment and amendment of a local wetlands protection bylaw. In 1979, Hanover passed its first Wetlands Protection Bylaw. This bylaw was directly linked with the state Wetlands Protection Act, M.G.L. 131, Section 40 (131/40). However, when 131/40 was revised in 1983, Hanover's bylaw still referred to Massachusetts's earlier version of the Act. Therefore, in 1985 the Conservation Commission initiated the establishment of a new bylaw, #6-14, under the Home Rule Amendment, which received town meeting approval in May of 1986.

Hanover's Wetlands Protection Bylaw provides for even greater protection of wetland areas, beyond the requirements of the State's regulations. Additional interests are listed for protection including wildlife habitats (soon to be included in 131/40), agricultural lands, recreation, and aesthetics. Hanover's Wetlands Protection Bylaw also expanded the area of protection by including the buffer zone, as defined in 131/40, as a continuation of the resource area (which requires a higher level of protection than the defined buffer zone). The MacConnell land use figures, which show no net decrease in the acreage of Hanover's wetlands between 1980 and 1984, reflect the effectiveness of this bylaw.

In 1985, the Town set up a fund into which project applicants must deposit the fees for engineering design review. Instead of collecting only the standard \$25 Notice of Intent filing fee required under 131/40, the Conservation Commission also collects fees for the review of submitted plans. In Fiscal Year 1987, the Commission deposited over \$29,000 in its Guaranteed Deposit Fund and dispersed almost \$12,000 for project review costs.

Regulations and standards governing the design and construction of detention basins were promulgated under the authority of the Hanover Wetlands Protection By-Law #6-14, Section 7, and went into effect April 1, 1987. Detention basins have been used as a means of flood control in subdivisions since the late 1970's. The establishment of regulations and standards provides for the uniformity of their construction and use. As one of the first communities in the state to pass such a set of regulations, Hanover continues to take a leadership role among Massachusetts communities in the protection of wetlands.

### Zoning Bylaws

Flood Plain, Wetland, and Watershed Protection District - This zoning district is an overlay district superimposed over the underlying zoning district. The area included in this district is delineated on a set of maps on file with the Town Clerk. This district was created to protect public health and safety in areas subject to flooding and protect, preserve, and maintain the water table and water recharge areas of present and potential water supplies. Special approval of the Planning Board is required for the construction of such facilities as dams, bridges, boat landings, and driveways.

Recreation-Conservation District - This bylaw is intended to protect the public health and safety from flood hazards and unsuitable development, and to protect the balance of nature within the designated area. Activities requiring approval from the Board of Appeals include development of picnic areas, restaurants, country clubs, and airports.

Water Resource Protection District - This bylaw serves to protect against the degradation of surface and ground water supplies within the district. The zoning district is an overlay district superimposed over the underlying zoning district and includes three well protection districts and an aquifer protection zone. The Planning Board holds permitting authority for activities proposed in the district. Activities presumed to be hazardous to the water supply, such as motor vehicle repair shops, storage and disposal sites of toxic materials, and beauty shops, are prohibited. Alteration of existing structures, construction of access roadways, and construction of single-family residential structures on non-wetland lots at least 30,000 square feet in area may be permitted by special permit.

### E. Town Appropriations for the Conservation Commission

Although the Commission's budget has suffered a cut in town appropriations since the passage of Proposition 2 1/2, the Town has approved an increase in funding for Commission personnel. In 1986, a one-year appropriation was voted to hire a Conservation Agent on a full-time basis, rather than half-time as in previous years. In 1987, the Personnel Board voted for the creation of a permanent full-time position following the realization of the Town's need for a full-time agent, who handles the clerical duties for the office as well.



F. Other Conservation Commission Activities

Besides land acquisition and establishment of protective bylaws and regulations, the Conservation Commission has been busy with its everyday activities of reviewing project proposals. Between 1979 through mid 1987, the Commission produced 151 Order of Conditions and since 1981 has conducted 240 hearings. An annual breakdown of these activities is shown below in Table I.A.

TABLE I.A

ACTIONS OF THE CONSERVATION COMMISSION  
BY CALENDAR YEAR

| YEAR         | ORDER OF CONDITIONS | HEARINGS |
|--------------|---------------------|----------|
| 1979         | 10                  | NA       |
| 1980         | 12                  | NA       |
| 1981         | 20                  | 29       |
| 1982         | 20                  | 21       |
| 1983         | 11                  | 20       |
| 1984         | 16                  | 29       |
| 1985         | 16                  | 55       |
| 1986         | 21                  | 59       |
| 1987 (6 mo.) | 17                  | 27       |

## II. BACKGROUND INFORMATION

### A. Recent Growth and Development Trends

Growth in the South Shore surged between 1950 and 1980. From 1980 to 1985, the region experienced a slowdown in population growth and residential development, although residential development is on the rise again since 1986. As for commercial development, no slowdown has occurred yet, and development proposals continue to overwhelm local planning boards. A recent inventory taken by the South Shore Coalition (representing ten South Shore communities including Hanover), documented over 3 million square feet of new office, commercial, and industrial development built or in construction between 1984 and 1987. Much of this growth has, and continues to occur along Route 3 which runs through the northeastern tip of Hanover. Hanover is listed as having the third highest rate of non-residential development in the ten town region, totaling 608,671 square feet over the last three and a half years. The Towns of Rockland and Weymouth have slightly higher totals. However, the region's commercial growth along Route 53 is reported to be the highest in Hanover.

As for residential development, some communities in the region are experiencing greater activity than others. Between January 1, 1986 and June 30, 1987, over 2,318 building permits for housing units were granted in the Coalition's ten town area. This figure translates into an average of 129 new units per month, compared with a monthly average of 62 units over the previous six years. This reflects an increase of 206% in the last year and a half. In the Town of Hanover, residential development remained relatively slow between 1979 and 1982. In 1983, a resurgence in residential activity occurred, although to a lesser degree than most other South Shore communities. Hanover approved less than 5% of the total number of residential building permits in the region over the last year and a half, exceeding only Cohasset, Hingham, and Norwell. However, the figures may be somewhat misleading as a number of sites ready for development have not been included in the statistics since they have not yet received the necessary permits. This is due to the Rate of Development Bylaw passed by the town limiting construction of dwelling units in any one subdivision to one fifth the number of building lots per year. A recent study by IEP, Inc. reported the existence of 318 vacant subdivided lots in Hanover. From the build-out analysis included in the study, IEP calculated that there is the potential for an additional 3,867 residential units if all subdivided land was to be developed. This would more than double the number of existing residential units. (Source: "Strategic Planning Grant, Town of Hanover" prepared for the Hanover Planning Board by IEP, Inc., August 1987.)

## B. The Regional Context for Open Space Planning

An open space plan is an important element in a town's overall planning effort. However, open space planning also should be considered in a broader regional context. The way in which an adjacent community uses abutting land can enhance or detract from the value of open space/conservation land in Hanover. The presence of conservation land in another town can improve the value of land abutting nearby towns, whereas a major residential or industrial development adjacent to another town's conservation land can have a detrimental effect. Awareness of open space planning in surrounding towns can alert decision-makers to potential conflicts as well as to opportunities for cooperating on projects of mutual benefit, such as trail systems or aquifer protection. Therefore, this section will address the open space planning efforts of surrounding towns as well as regional open space concerns.

Norwell - The Metropolitan Area Planning Council assisted the Town of Norwell in updating its open space plan during 1986. The plan recommended the acquisition of lands along the North River and Third Herring Brook, both of which run along the Norwell-Hanover town line. Presently, conservation restrictions exist for some areas along the lower end of Third Herring Brook and the North River.

Pembroke - The town owns conservation lands where the North River and Third Herring Brook diverge and along the Indianhead River. The latter area is protected from erosion by a ban on motorized vehicles on its walking trails. Pembroke does not have a formal open space plan at this time.

Hanson - The town shares ownership of two conservation properties with Hanover. One parcel runs for 20 miles along Factory Pond and the other parcel entitled Rocky Run, consists of 2.5 acres along the Indianhead River. Hanson has sole ownership of a small parcel bordering Hanover off of King Street. The town recently retained the firm of IEP Inc. to develop an open space plan. A draft of the plan has been completed and is being reviewed by the town.

Rockland - The town owns a small 3-4 acre parcel near the Hanover town line with the potential for acquisition of another 20 acres. The town currently has no open space plan.

### The South Shore Coalition

The South Shore Coalition represents an opportunity for Hanover and its neighbors to work together on open space issues of mutual concern. Although the Coalition is not specifically an open space/conservation group, it does provide the means for regional coordination. The Coalition consists of representatives from Cohasset, Duxbury, Hanover, Hingham, Hull, Marshfield, Norwell, Rockland, Scituate and Weymouth who have united to address regional issues such as transportation, solid waste, and water quality. The Coalition formed in 1985 as a subregional group under the



auspices of the Metropolitan Area Planning Council. Its creation evolved as a result of coordinated efforts by Senator William Golden, the Executive Office of Communities and Development (EOCD), and MAPC. In February of 1986, EOCD awarded the Coalition an Incentive Aid Grant used to hire a full-time planner and establish an office in the Norwell Town Hall.

#### The Statewide Comprehensive Outdoor Recreation Plan (SCORP)

The SCORP is a document prepared by the Massachusetts State Department of Environmental Management (DEM) every five years to serve as the state's five year agenda for outdoor recreation and natural resource protection. The DEM currently is in the process of preparing a new SCORP geared towards analyzing the supply and demand for outdoor recreation. The previous plan is entitled "The Outdoor Heritage of Massachusetts: Strategies for its Protection, Promotion and Enjoyment, 1983-1988." The plan presents twenty-six policies covering eight major areas of concern. Although it is designed primarily to guide the state's activities, a review of its policies will help local officials to understand how their actions relate to statewide goals.

#### The 1976 Regional Open Space Plan

The 1976 Regional Open Space Plan was prepared by the Metropolitan Area Planning Council. The plan outlines actions necessary to ensure the availability of open space within the region. It focuses on four major areas: coastal, fresh water, urban open spaces, and reservations. Pages 63-64 of the plan discuss the importance of preserving the North River corridor. The Town of Hanover's open space plan is consistent with the following recommendations of the 1976 Regional Open Space Plan:

- a) Protect all wetlands associated with river systems.
- b) Develop local park facilities along the rivers.
- c) Provide public access to the rivers.
- d) Establish floodplain zoning to protect river corridors from inappropriate development.

#### The Bay Circuit Program

The Bay Circuit program, administered by the D.E.M., is designed to create a system of privately and publicly owned open spaces, including parks, forests, wildlife preserves and scenic and historic sites, in the area between Routes 128 and 495 from Cranes Beach in the north to Duxbury in the south. Although Hanover is not one of the towns included in the Bay Circuit program, its neighbors, Pembroke and Hanson, are. The increased recreational opportunities available when the Bay Circuit is completed may well have an effect on Hanover's open spaces. The Bay Circuit will make use of rivers as linking elements, and therefore may cause an increase in the number of visitors to the North River. There also may be opportunities for creating trail systems in Hanover that would feed into the Bay Circuit.



## The North River Commission

The North River Commission formed in 1978 as a result of the North River's designation as a scenic and recreational river under the Scenic and Recreational Rivers Act. The North River Commission is composed of selectmen and designees from each town bordering the river. The responsibilities of the North River Commission are described in Chapter VII.

## C. Physical Characteristics

### Vegetation and Wildlife

The Massachusetts Natural Heritage Program (MNHP) provided information on rare and endangered species sighted in the Town of Hanover. MNHP reports a highly significant rare species habitat along the North River. The area supports two rare plants, both of which are listed by the Massachusetts Division of Fisheries and Wildlife (MDFW) as State Endangered, and one that is considered a candidate for federal listing by the U.S. Fish and Wildlife Service. In addition, a rare animal, listed by the MDFW as a Species of Special Concern, is reported to inhabit the West Hanover Neighborhood. Exact names and locations of species have been withheld to protect their habitats. The MNHP strongly recommends that all of the above referenced sites receive serious consideration for protection.

### Unique Features

The North River is a valuable resource and unique feature in the Town of Hanover. In 1977, the River was designated a National Natural Landmark through the National Natural Landmarks Program, administered by the National Park Service of the United States Department of the Interior; and a Scenic and Recreational River under the Scenic Rivers Act in 1978. The North River originates in Hanover, flowing through Hanson, Pembroke, and Norwell, to reach its mouth on the Town borders of Scituate and Marshfield. The River is noted for its expansive wetland areas and its rich diversity of wildlife and aquatic vegetation.

### Other Physical Characteristics

Additional information describing Hanover's topography, soils, climate, and air quality can be found in the 1979 Hanover Open Space Plan (see section on Physical Characteristics, pp. 26-38).

## D. Water Supply

The Town of Hanover maintains a high quality, self-sufficient water supply although an exceptionally low rainfall this past spring forced the Department of Public Works (DPW), for the first time in over ten years, to declare a voluntary water restriction in June of 1987. In July the restriction became mandatory due to the continued drought.

In anticipation of Hanover's growth and increased water demand, the DPW has begun to look for new sources of water to provide for an additional 3-4 million gallons per day over the next 40 - 50 years. Few available, affordable surface water supplies exist in Hanover or nearby communities. Therefore, the DPW is looking for deep well sources by means of an infrared fracture rock survey. Tapping new water sources may require town purchase of additional properties for supply and protection purposes.

A major achievement for water resource protection occurred in 1981 when the Town voted in favor of establishing a Water Resource Protection District. The district was delineated with the intent to protect both surface and ground water supplies from hazardous pollutants and contaminants. The district overlays other zoning districts and includes three well protection districts and an aquifer protection zone. The three well protection districts are: Pond Street Well Field containing three wells; Hanover Street Well Field containing two wells; and Broadway Well Field containing two wells. Within the district, specific uses presumed to be hazardous to the town's water supply are restricted and a number of other uses require a special permit from the Hanover Planning Board.

In conjunction with the establishment of the Water Resource Protection District, a Water Resource Protection Bylaw was passed. The bylaw serves to outline the performance standards that govern activities potentially harmful to groundwater supplies in the Water Resource Protection District. The performance standards cover such activities as sewage overflow, fertilizer application, handling and disposal of toxic and hazardous substances, and clearing, earthmoving, and paving of land. The Boards of Health and Public Works oversee compliance, review, and enforcement of the bylaw.

#### E. Land Use Patterns

The MacConnell Land-Use maps, prepared by the Department of Forestry and Wildlife Management at the University of Massachusetts, Amherst, were used to determine recent land use patterns in Hanover. Below is a summary of the information obtained.

TABLE II.A

| Land Use           | 1980<br>(acres) | 1984<br>(acres) | Net Change<br>(acres) |
|--------------------|-----------------|-----------------|-----------------------|
| Dense Residential  | 0               | 8               | +8                    |
| Medium Residential | 1,355           | 1,381           | + 26                  |
| Light Residential  | 1,200           | 1,269           | + 69                  |
| Commercial         | 285             | 308             | + 23                  |
| Industrial         | 120             | 120             | 0                     |
| Forest             | 5,673           | 5,550           | - 123                 |
| Open               | 190             | 185             | - 5                   |
| Fresh Wetlands     | 185             | 185             | 0                     |
| Salt Wetlands      | 10              | 10              | 0                     |

Medium and low-density residential development is the primary land-use in the town. The major changes between 1980 - 1984 were the loss of forested areas and an increase in low-density residential development.

#### F. Population/Housing/Employment/Income

##### Population

The 1980 population of Hanover as reported by the United States Census was 11,358. The Census Bureau estimate for 1984 was 11,403. The Hanover town census shows a 1986 population of 11,847; a 4.3% increase over 6 years. MAPC projections for 1990, 1995, and 2000 are 12,700; 13,000; and 13,200 respectively. For the time period covered by this plan update (1988-1993), a population increase of roughly 9.7% is projected.

The 1980 population showed a median age of 28.7 years. There were 2,852 families, including 239 single-parent families with children. A detailed breakdown by age groups for the 1985 population and the projected age breakdown for 1990 and 1995 are shown in Appendix C. Table II.B presents this information aggregated into five age groups showing the number and percentage of the population in each group. The 20-39 year-olds represented the greatest percentage of the population in 1985. By 1995, the 40-59 year-olds will comprise the highest percentage of the population. The percentage of the population 60 years old and older will hold steady, but the number of 10-19 year-olds will decline.

More detailed socio-economic statistics can be found in Appendix C.

TABLE II.B  
PROJECTED POPULATION BY AGE

| Age Group | 1985   |        | 1990   |        | 1995   |        |
|-----------|--------|--------|--------|--------|--------|--------|
|           | #      | %      | #      | %      | #      | %      |
| 0-9       | 1660   | 14.31  | 1812   | 14.38  | 1986   | 14.52  |
| 10-19     | 2519   | 21.71  | 2347   | 18.63  | 2347   | 17.16  |
| 20-39     | 3623   | 31.22  | 3824   | 30.34  | 3946   | 28.84  |
| 40-59     | 2696   | 23.24  | 3407   | 27.03  | 4099   | 29.96  |
| 60 +      | 1105   | 9.52   | 1213   | 9.62   | 1303   | 9.52   |
| Total     | 11,603 | 100.00 | 12,603 | 100.00 | 13,681 | 100.00 |

Source: Massachusetts Institute of Social and Economic Research, University of Massachusetts at Amherst, June, 1986.

The population density in Hanover is relatively low compared to other cities and towns in the metropolitan area. Hanover is one of 26 towns in the region where the density is in the 500-999 persons per square mile range. In Hanover, the density is 734 persons per square mile.

### Housing

The minimum lot size for residential development is 3/4 acre (30,000 sq. ft.). In the last three years, minimum-sized buildable lots have risen in cost from \$60,000 to \$100,000 - \$120,000. The 1980 U.S. Census reports a total of 3,218 housing units in the Town of Hanover in 1980 with an average of 3.5 persons per family. 91% of the units were single-family structures. The Town's Building Inspector reports a total of 3,300 housing units as of July 1987 with 97% of the units being single-family structures.

Table II.C lists the figures for new development and subdivisions in Hanover from 1979 to the present.

TABLE II.C

| Year   | New Dwellings | New Businesses | Approved Subdivisions |
|--------|---------------|----------------|-----------------------|
| 1979   | 25            | 12             | NA                    |
| 1980   | 29            | 31             | NA                    |
| 1981   | 30            | 3              | NA                    |
| 1982   | 32            | 4              | NA                    |
| 1983   | 79            | 9              | NA                    |
| 1984   | 78            | 9              | 2                     |
| 1985   | 85            | 19             | 3                     |
| 1986   | 83            | 14             | 9                     |
| 1987 * | 21            |                | 5                     |

\*First 6 months.

Source: Annual Hanover Town Reports



### Employment

The 1980 U.S. Census data reports a labor force participation of 69.4% for Hanover residents aged sixteen or older. Residents are employed in a variety of occupations, both in the professional and manual labor sectors. The highest percentage of residents, 21.6%, work in retail trade, followed by 11.8% who work in educational services.

### Income

The per capita income in Hanover as reported in the 1980 U.S. Census was \$7,568 as compared to the per capita income of \$8,182 for the Boston Standard Metropolitan Statistical Area. However, the 1980 median family income of \$27,034 (rising from \$13,071 in 1970) was higher than the average for the Boston metropolitan area. The percentage of persons in Hanover with incomes below the poverty level in 1980 was 4.3%.

### G. Historical and Scenic Resources

The Scenic Roads Act (M.G.L. Ch. 40, Section 15C) affords a certain level of protection to roadside trees and stone walls on local roads that have been officially designated as Scenic Roads. This law allows a road (other than a numbered route or state highway) to be designated as a Scenic Road upon the recommendation or request of the planning board, conservation commission, or historical commission. The planning board is required to hold a public hearing and to make a recommendation on any proposal that involves cutting down trees or destroying stone walls. There are five Scenic Roads in Hanover: Whiting Street, Broadway, Old Washington Street, Washington Street, and Union Street. The first two were designated as a result of resident petitions.

One property, the Stetson House on Hanover Street, is listed on the State and National Register of Historic Places. It was designated in 1978 upon the purchase of the property by the Town from the Society for the Preservation of New England Antiquities. The property is also protected by a local preservation restriction. The Hanover Historical Commission lists 380 parcels as historic sites. Approximately 95% of the sites are privately-owned residences. The other 5% are town-owned public buildings including the Town Hall and Town Library. Most of these historic sites are located at the Four Corners area and on Main Street and Broadway.

The Hanover Historical Commission is working on a number of projects to improve and protect the community's historic resources. The Town appropriated \$2,000 for the Historical Commission to hire a consultant to delineate an historic district for the Town Center to be registered in the National and State Register of Historic Districts. The area would include publicly-owned properties such as the Town Hall, Town Library, the Stetson House, town cemetery, fire station, and the Congregational Church and parsonage. The Commission also is working on plans to develop a gazebo and walkways in back of the Town Hall for public use; and to upgrade the Stetson House with the opening of a museum and country store.

### III. GOALS AND OBJECTIVES

#### A. Introduction

Reassessment of the goals and objectives listed in Hanover's 1979 Open Space Plan is an important component of updating the plan. This process includes: 1) determining what progress has been made towards achieving the stated goals and objectives 2) determining which of the stated goals and objectives are still valid and the priority of consideration given to those that are still valid and 3) listing any new goals and objectives that now reflect the open space needs of the Town of Hanover.

#### B. Process of Updating the Goals and Objectives

In order to reassess the goals and objectives of the 1979 Plan, a survey was sent to members of the Growth Policy Committee and selected civic organizations. A copy of the survey can be found in Appendix A. The surveys were discussed by each board at a regular meeting and at a Growth Policy Committee meeting held on June 18, 1987. The MAPC received eleven completed surveys for compilation.

#### C. Progress Since the 1979 Plan

In general, respondents to the survey felt that some progress had been made towards achieving most of the goals of the 1979 Plan. However, there were several objectives listed in the 1979 Plan on which a majority of respondents felt that no progress had been made. These include the following:

Goal II Objective A- Acquire and develop neighborhood outdoor recreation facilities.

Goal III Objective B - Acquire land or easements for areas of historical or scenic significance.

Goal IV Objective A - Design open space to harmonize with areas of urban development.

Goal IV Objective D - Provide incentives to land developers to consider the values of incorporating open space within the design of development.

Goal IV Objective E - Encourage the agricultural preservation of lands for farming or forestry as part of the heritage of the community.

#### D. Goals and Objectives for the 1987 Open Space Plan Update

The majority of respondents felt that almost all of the goals and objectives of the 1979 open space plan were still valid for the 1987 Plan Update. However, the survey identified certain goals and objectives that were given a higher priority than others. The goals and objectives of the

1979 Plan have been revised to reflect these changing priorities and newly identified needs. A seventh goal relating to maintenance and access also has been added. Each of the goals below includes a brief discussion of its status and priority, followed by a description of their objectives.

#### GOAL 1

Protect the integrity of wetlands, watersheds, existing and potential aquifers, groundwater recharge areas, ponds, streams, and floodplains.

Discussion - The objectives within this goal cited as having the highest priority were those related to identifying and eliminating water pollution and controlling the use of wetlands. The objectives relating to groundwater protection were less of a priority because of the considerable progress which the town has made through its aquifer protection and well protection zoning.

##### Objectives:

- (a) Identify existing sources of water pollution and employ the best means for eliminating the sources in order to maintain water resources that can serve many purposes.
- (b) Control by acquisition or restrictive easement the uses of wetlands (including ponds and streams) within the town.
- (c) Update town bylaws and/or regulations to protect against the pollution and degradation of valuable resources.
- (d) Provide protection of areas designated as significant groundwater areas, including the delineation of aquifer recharge areas and well protection districts .
- (e) Create incentives for maintaining wetlands in their natural state.

#### GOAL II

Meet current and future needs for recreation programs and facilities for residents of the community.

Discussion - This goal was viewed as having a medium priority and was one where little progress had been made. Although it is still considered a valid goal, the consensus appears to be that there is a greater need to focus on resource protection. The lack of funds for developing recreational facilities and the problems of vandalism are two reasons why this goal may be difficult to achieve.

Objectives:

- (a) Plan for acquisition and development of outdoor recreation facilities to accommodate neighborhood populations.
- (b) Consider recreation activities that are lacking or inadequate based on public demand and plan for future inclusion in community programs.
- (c) Develop or improve existing recreation facilities.
- (d) Prepare for recreation programs and facilities for use by all age groups.
- (e) Provide for special needs programs utilizing existing and future recreation facilities.

GOAL III

Preserve the historic value of known sites within the Town.

Discussion - This goal was viewed as being a high priority. Most respondents felt that little progress has been made up to this point.

Objectives:

- (a) Cooperate with the Historical Society and other interested parties to restore, preserve, and contribute to rehabilitation efforts for areas known to be of historical significance to the Town.
- (b) Attempt to acquire land or restrictive easements for areas that have known historical or scenic significance.

GOAL IV

Plan for the integration of open space uses with urban development for the benefit of all interests in the community.

Discussion - The majority of respondents rated all of the objectives a high priority. Several of those objectives relate to the need to involve the business community and land developers in the preservation of open space. Due to the lack of funding for the Town to pursue vigorously all of its open space preservation objectives, involving the private sector should be given further consideration.



Objectives:

- (a) Structure open space to harmonize with areas of urban development.
- (b) Identify open space lands that are suitable for urbanization and lands that are environmentally significant.
- (c) Encourage business interests to consider open space as part of the design of urban development.
- (d) Provide incentives to land developers to encourage the incorporation of open space in private development plans.

GOAL V

Prepare for continued growth of the community in a planned systematic fashion that can accommodate the needs of the citizens and maintain the resources that are attractive to residents.

Discussion - This is a very high priority for the town and reflects the Town's awareness that open space preservation is closely linked to development issues. Pursuing the goal of planned, systematic growth will ensure that open space preservation is considered in conjunction with other Town needs, rather than separately.

Objectives:

- (a) Prepare a comprehensive plan for controlled growth.
- (b) Educate residents on the importance of open space.
- (c) Solicit citizen participation in preparing for future growth and development.
- (d) Consider all citizen input.

GOAL VI

Promote cooperation among all town boards and departments in preparing for future growth demands.

Discussion - This goal also was viewed as a high priority goal. Given the inter-relatedness of the various regulations administered by a variety of town boards, communication among the governing boards is important.

Objectives:

- (a) Evaluate demands on town natural resources, including all aspects such as soil types, water demands, runoff, sewage disposal from industrial, commercial and business land use in order to minimize the impact of the land use on the natural resources of the town.
- (b) Review existing bylaws and regulations by all town boards and departments to ascertain those areas requiring coordinated protection efforts to optimize open space preservation.
- (c) Promote educational opportunities for local officials to learn specific tools with which to balance land preservation and development.

GOAL VII

Improve the maintenance and accessibility of open space areas.

Discussion - This goal has been added as a result of the survey on open space needs. Inadequate access and maintenance often were cited as reasons why open space areas were not being utilized fully for passive recreation.

Objectives:

- (a) Clean up areas littered with trash or debris.
- (b) Develop an improved maintenance system to keep areas safe and clean.
- (c) Publicize the availability of open space areas for residents.
- (d) Improve signage denoting location and access points to town-owned open space areas.
- (e) Improve and/or develop safe, accessible points of access for residents.
- (f) Encourage the use of open space for purposes of recreation, aesthetic enjoyment, or science/nature study classes.
- (g) Develop the necessary policing and management support to increase the safe use of open space lands.

#### IV. INVENTORY OF OPEN SPACE LANDS

##### A. Introduction

This chapter describes the open space lands acquired by the Town since the completion of the 1979 Open Space Plan. It also provides a review of other types of protected and restricted land. This inventory serves to increase the reader's awareness of existing open spaces and to provide a baseline against which to evaluate existing and future needs. More detailed information on individual open space and recreation sites can be found in Appendix B and in the 1979 Open Space Plan.

For the purposes of open space planning, it is useful to divide all undeveloped land into several categories, depending on the degree of protection from development. This helps to identify those areas where preservation or acquisition efforts should be targeted. The following categories will be used in this chapter:

Highly Protected Conservation and Recreation Land - This includes all land that is held in fee simple ownership by a municipal, state or federal agency or non-profit conservation organization. These lands are owned and managed specifically for the purpose of conservation and/or recreation. The Massachusetts Constitution (Article 49) and M.G.L. Chapter 40 make it difficult for a municipality to sell or transfer conservation land.

Moderately Protected Open Land - This category includes open land associated with major institutions (public or private) where the open space use is secondary to a non-conservation use. Examples include schools, colleges, cemeteries, hospitals, and military installations. It also includes commercial recreational facilities such as golf courses. These lands are not fully protected from potential development.

Restricted Open Land - This category consists primarily of privately-owned land from which development is restricted through a conservation restriction in perpetuity or an agricultural preservation restriction.

Moderately Restricted Open Land - This includes land that is taxed as forest, farm, or recreation land under Chapter 61, 61A, or 61B for which development is restricted through a short-term (5-30 years) conservation restriction. These tax programs often are used to lower taxes until such time as development or sale is economically feasible or desired and are seldom used on a long-term basis. These lands are quite vulnerable to development.

Unprotected Land - This includes all undeveloped land that has not been developed for residential, commercial, industrial development, or transportation-related uses.

B. Highly Protected Conservation and Recreation Land

Conservation Commission - The land acquisition efforts of the Conservation Commission have been constrained by the passage of Proposition 2 1/2. Many of the recent acquisitions of land have been obtained through donations from landowners. The Town has acquired 9 parcels totaling 71.55 acres since 1979. The majority of this land is distributed equally in two neighborhoods: 30.5 acres in Hanover Four Corners and 30.35 acres in South Hanover. No new land has been acquired in West Hanover, Indian Village, or Walnut Hill.

TABLE IV.A  
DISTRIBUTION OF CONSERVATION LAND

|                         | Acres in<br>1979 | Acres in<br>1987 | Increase in<br>Acres |
|-------------------------|------------------|------------------|----------------------|
| North Hanover           | 88.34            | 89.44            | 1.1                  |
| West Hanover            | 286.23           | 286.23           | 0.0                  |
| Indian Village          | 187.68           | 187.68           | 0.0                  |
| South Hanover           | 26.69            | 57.04            | 30.35                |
| Walnut Hill             | 97.45            | 97.45            | 0.0                  |
| Hanover Center          | 8.15             | 17.75            | 9.6                  |
| Hanover Four<br>Corners | 87.65            | 118.65           | 30.5                 |
| -----                   |                  |                  |                      |
| TOTAL                   | 782.19           | 854.24           | 71.55                |



Description of Conservation Commission Parcels Acquired Since 1979

(1) North Hanover and Assinippi Section

Key Sites 1.1 Acres

(a) Fairbairn Property

Ownership: Town  
Zoning: Commercial  
Management: Conservation Commission

The Fairbairn property is located on Webster Street near the old cemetery close to the Norwell Town line. The parcel contains wooded wetlands.

(2) West Hanover

No sites have been acquired in this neighborhood.

(3) Indian Village and Fireworks Section

No sites have been acquired in this neighborhood.

(4) South Hanover Section

Key Sites 30.35 Acres

(a) Church/Hanson

Ownership: Town 4.4 Acres  
Zoning: Residential  
Management: Conservation Commission

This property is located on the north side of Broadway. It consists of an open field, wet meadows, a brook, and a red maple swamp.

(b) Indianhead River Parcel 1.70 Acres

Ownership: Town  
Zoning: Residential  
Management: Conservation Commission

This property is located near Broadway and Cross Street. The parcel consists of woods running 750 feet along the bank of the Indianhead River. The parcel provides access for fishing.

(c) Tindale Bog Addition

0.10 Acres

Ownership: Town  
Zoning: Residential  
Management: Conservation Commission

This small triangle of land abuts the Railroad Right-of-Way and the Tindale Bog parcel. The land is upland meadow.

(d) Riverside

0.50 Acres

Ownership: Town  
Zoning: Residential  
Management: Conservation Commission

This parcel consists of wetlands abutting other conservation land.

(e) Folly Hill

23.65 Acres

Ownership: Town  
Zoning: Well protection district, residential  
Management: Conservation Commission

This parcel is located on Broadway Street. It consists of a red maple swamp and some uplands adjacent to other conservation land, through which run walking trails.

(5) Walnut Hill Section

No new sites have been acquired in this neighborhood since 1979.

(6) Hanover Center Section

(a) Bonney/Henderson

6.7 Acres

Ownership: Town  
Zoning: Residential  
Management: Conservation Commission

This property is located near Union Street and Old Washington Street and consists of wooded upland.

(b) Plymouth Street

2.9 Acres

Ownership: Town  
Zoning: Residential  
Management: Conservation Commission

This parcel is located at the end of Plymouth Street and contains a brook with bordering vegetated wetlands and a red maple swamp.

(7) Hanover Four Corners Section

(a) Old Pond Swamp

30.5 Acres

Ownership: Town  
Zoning: Limited industrial, aquifer protection  
Management: Conservation Commission

This parcel is adjacent to other conservation land at Pond Street and Rawson Road. The site is a red maple swamp bordering the Third Herring Brook and provides a site for recreational fishing.

C. Description of Other Highly Protected Land

Water Supply Land

The Department of Public Works (DPW) in Hanover manages the 158.76 acres of water supply land including well sites and protection areas. The DPW has not acquired any new lands since the 1979 Plan.

Public Recreation

Town Land - Aside from the school sites, the Town owns five recreational facilities totaling 99.27 acres, managed by the Parks and Recreation Department. No new recreational facilities have been added since the 1979 Open Space Plan.

State Land - The state Department of Environmental Management operates a 2.71 acre canoe launch and parking area on Riverside Drive.

Non-Profit Conservation/Recreation Land

The South Shore Natural Science Center, located in Norwell, owns a 6.04 acre parcel of land on Hacketts Pond Road in the North Hanover neighborhood.

Other Highly Protected Land

Other lands in this category include a parcel owned by the Plymouth County Conservation District, and two town-owned parcels: the Morrill Allen Phillips Wildlife Sanctuary and a parcel adjacent to Hacketts Pond.

D. Moderately Protected Open Land

Schools

Eight public school sites contain a total of 209.57 acres. Although this land is town-owned, it is included in the moderately protected category because the recreational use could change in the event of future school closings.

### Cemeteries

There are four cemeteries in the Town: Norwell Cemetery, Union Cemetery, Darling Cemetery, and Hanover Cemetery.

### Institutions

The Cardinal Cushing School is the only major institution in Hanover with significant open space. The school occupies 179.64 acres on which sits the school's facilities and elderly housing.

### E. Restricted Open Land

A number of methods exist to restrict development on lands considered valuable in a natural state without resorting to the more costly method of fee simple acquisition. The use of Conservation Restrictions (CRs), Agricultural Preservation Restriction (APRs) and the taxation benefits of Chapters 61, 61A, and 61B can all be appropriate conservation methods.

### Conservation Restrictions

A conservation restriction is a legally binding agreement between a land-owner and a public agency (usually the Conservation Commission) or a non-profit land trust, where the land-owner agrees to keep the land undeveloped and in its natural state. Public access may be permitted, but is not required. Conservation restrictions are permitted under the Conservation Restrictions Act (M.G.L./Ch. 184, Section 31-33 and amendments) and must be approved by the Secretary of the Executive Office of Environmental Affairs. Conservation restrictions have a number of advantages: (1) They cost less than fee simple acquisition. (2) The owner still pays real estate taxes (although usually at a lower rate), and (3) The owner continues to maintain the land. Hanover currently maintains two conservation restrictions. These are described in Appendix B.

### Agricultural Preservation Restrictions

An agricultural preservation restriction (APR) is a variation of a conservation restriction whose purpose is to preserve agricultural land. The Conservation Restrictions Act was amended in 1977 to allow the creation of APRs and to fund their acquisition by the Commonwealth through the Department of Food and Agriculture. Hanover has no APRs and the potential for their use is limited due to the lack of any large working farms in Hanover.



## F. Moderately Restricted Open Land

### Chapter 61

Chapter 61 of the General Laws relates to the classification and taxation of forest lands and forest products. Under this taxation program, parcels of ten or more contiguous acres under an approved management plan are taxed at 5% of fair market value. If the forestry use is discontinued, a penalty must be paid. When land that is being taxed under Chapter 61 is put up for sale, the municipality has 120 days in which to exercise its right of first refusal to purchase the land at full market value. This provision allows municipalities the opportunity to plan for acquisition of parcels with conservation value. Within Hanover, there are six parcels totaling 140.37 acres of forest land under Chapter 61. These parcels are found in four of the seven neighborhoods of Hanover, with South Hanover containing the highest acreage (59.09 acres). 37.8% of the total forested area of 371 acres is assessed under Chapter 61.

### Chapter 61A

Chapter 61A is the Farm Assessment Act that provides for the use-value assessment of parcels of agricultural and horticultural land five acres or greater. There are provisions similar to Chapter 61 regarding the penalty for discontinuation of use and the town's option of first refusal when the land is put on the market. In Hanover, there are no parcels assessed under Chapter 61A.

### Chapter 61B

Chapter 61B provides for a reduction in tax assessment of at least 75% on parcels of five acres or larger that are classified as recreational, wild, or open land. Recreation is defined as activities such as hiking, camping, nature study, swimming, etc. There are no parcels in Hanover assessed under this provision.

## V. ANALYSIS OF NEEDS

### A. Introduction

One way of assessing the open space and recreation needs of a community is to apply a set of standards to the community's open space and recreation resources. The National Recreation and Park Association (NRPA) has published a set of widely-used standards. Standards such as these should be used as a guide to planning, rather than as absolutes, because of each community's individual needs. A more useful measure of whether a particular community has adequate recreation and open space areas is the opinion of the residents and local officials themselves. However, using these standards can give planners and decision-makers some ideas as to where unmet needs may exist. Both approaches have been used in this plan update.

### B. Local Needs Assessment

The 1979 Plan included an extensive analysis of both conservation and active recreation needs. The 1987 Plan Update will consider only conservation/open space needs. In order to determine what open space/conservation needs exist in the Town, a survey was distributed to the boards represented on the Hanover Growth Policy Committee and to selected civic organizations in the Town. A copy of the survey can be found in Appendix A. Responses were received from the following groups:

- Planning Board
- Board of Selectmen
- School Board
- Three members of the Conservation Commission
- One individual member of the Planning Board
- A former member of the Growth Policy Committee
- Chamber of Commerce
- Hanover Historical Commission
- Board of Health

The surveys were discussed at a regular meeting of each board and at a meeting of the Growth Policy Committee on June 18, 1987.

### C. Survey Results

1) Priorities for Acquisition/Protection - When asked to assign a high, medium or low priority for acquisition and protection of eleven types of land, aquifer recharge received the most "high priority" ratings (7 out of 11 respondents), followed by wetlands (6 out of 11 respondents).

Another six types of land (woods, agriculture, open fields, water bodies, cultural/historic sites, and wildlife habitat areas) all received an equal number (four) of high priority responses. The acquisition and protection of developable land, scenic views, and floodplains were rated as a low priority.

2) Passive Recreation Needs - Passive recreation consists of activities that are generally non-motorized, require little or no facilities, and are pursued in natural settings. The majority of respondents (7) felt that more opportunities should exist for passive recreation on conservation land. Of the nine types of passive recreation suggested, bikepaths and hiking trails were considered to be needed the most. Jogging paths and picnic facilities also were considered a high priority.

3) Improvements to Conservation Land - Most comments related to the need for better access, clearing of fallen trees and debris, and the need for better policing of conservation lands before additional use is encouraged. Limited Conservation Commission maintenance funds and DPW personnel have precluded an increase in maintenance efforts.

4) Public Education and Awareness - There was general agreement that most Hanover citizens probably are not aware of the full extent of the Conservation Commission's holdings and that there is a need to educate the public on the existence and value of these parcels.

#### D. Additional Needs

At the June 18 meeting, members of the Growth Policy Committee identified a number of other needs and areas of concern.

Funding for open space acquisition, development, and maintenance was viewed as a major problem. Prior to Proposition 2 1/2, the Conservation Commission had been able to appropriate up to \$50,000 per year for land acquisition and maintenance. Facilities such as picnic tables and trails were developed and maintained. In 1980, appropriations for maintenance dropped from \$1,000 in 1979 to \$500. No increase was made in this appropriation until 1986 when it rose to \$1,100. Furthermore, the DPW staff has dropped from 58 in 1978 to 29 in 1987. Many public trails are now overgrown due to insufficient funds for maintenance. Picnic tables that had been vandalized have not been replaced. The Town's most recent land acquisitions have been through landowner donations.

The Growth Policy Committee members felt that the town might want to focus on acquiring smaller parcels in the future. This approach is in keeping with a lowered availability of funding. It also was felt that smaller parcels would be easier to maintain and police because they would have less interior space, thus allowing for greater visibility of activities. This visibility also presumably would reduce acts of vandalism.

Although the survey did not identify any particular groups needing special facilities, there was some discussion concerning the needs of senior citizens for paths suitable for walking and open areas with benches for sitting.



### E. Special Needs

When planning for open space and recreation, it is important to consider the needs of special groups such as young children, the elderly, and the handicapped. It is particularly important in planning for active recreation. Since this is not a plan for active recreation, the needs of these special groups can only be considered in the context of open space and passive recreation. The use of the trails on conservation land by people with special needs will depend on the age and physical condition of the individual. Although not located within the Town of Hanover, there is one nature trail for the visually impaired at the South Shore Natural Science Center in Norwell. In general, paved trails that could accommodate wheelchairs are not appropriate on conservation land, although this could be considered if a real need was shown. Planning for future improvements should take these needs into consideration.

Statistics on the number of handicapped individuals in Hanover were difficult to obtain. The School Department indicated that there were 350 handicapped children within regular classrooms. Another 25 students participate in the Collaborative Program that involves seven towns. A total of 14 - 16% of children aged 3 - 22 in Hanover are categorized as handicapped. The only statistic on the adult handicapped population is from the U.S. Census for 1980. There were 7,117 persons between the ages of 16 and 64 who were not living in institutions and reported a work disability according to the Census' definition.

### F. National Standards for Open Space and Recreation

The NRPA standards are divided into three sections.

Local/Close-to-Home Space - This category provides population-based acreage standards for various categories of parks with an emphasis on active recreational facilities. Because this plan is meant to discuss only passive recreation, no attempt has been made to apply the NRPA standards to evaluate the adequacy of active recreation facilities.

Regional Space - Regional Space has two components: regional/metropolitan parks and regional park reserves. These categories encompass open spaces of 200-1,000 acres that are within one hour's driving time, serve several communities, and provide recreation and/or natural resource protection. The population-based standards indicate that Hanover should have access to approximately 227 acres of regional/metropolitan parks. Wompatuck State Park and Ames Nowell State Park in Abington fulfill this need by providing outdoor recreation such as picnicking, boating, camping, trails, and fishing. The second component, regional park reserves, is fulfilled by a number of areas, including Wompatuck, the MDC Blue Hills Reservation, and two properties owned by the Trustees of Reservations; the Whitney-Thayer Woods (Cohasset/Hingham) and World's End Reservation (Hingham).



Locally Or Regionally Located Open Space Unique to Each Community - This category includes linear parks, special use areas, and conservation areas. There are no population-based acreage standards provided for these categories. The definition of linear park includes hiking trails as well as canoeing. The North River qualifies as a linear park or recreation resource as do the trails found on conservation land. The NRPA defines conservancy areas as lands set aside for the "protection and management of the natural/cultural environment with recreation use as a secondary objective." All of the Conservation Commission and Department of Public Works lands as well as land owned by the non-profit organizations fall within this category.

## VI. FIVE YEAR ACTION PLAN

Introduction - The Five Year Action Plan is the most important section of an open space plan. The recommended actions in this chapter are meant to bridge the gap between the existing open space resources, the goals and objectives of the plan, and the needs and desires of town residents. The designation of a target year is meant to give some indication of the priority of the activity. Certain actions are designated as ongoing because of the flexibility required to pursue certain activities such as land acquisition.

### GOAL I

PROTECT THE INTEGRITY OF WETLANDS, WATERSHEDS, EXISTING AND  
POTENTIAL AQUIFERS, GROUNDWATER RECHARGE AREAS, PONDS, STREAMS  
AND FLOODPLAINS.

#### 1) Acquire Additional Land in the Aquifer Protection Zone

Land acquisition efforts should be focused on the following neighborhoods that fall within the Aquifer Protection Zone: Hanover Four Corners and Hanover Center. Further impetus to acquire more land in the Aquifer Protection Zone may result from the 1986 amendments to the Federal Safe Drinking Water Act. Regulations on water quality standards may become more stringent, thus prompting communities to extend their water supply protection measures even further. (Ongoing - high priority)

#### 2) Encourage Greater Enrollment in Chapter 61

Chapter 61 of the General Laws relates to the classification and taxation of forest lands. The Town has the right of first refusal in the purchase of land enrolled in this program when it is put up for sale. Therefore, it is to the Town's advantage to have as much land assessed under this program, particularly in areas with a high priority for future acquisition. The Town should also work with landowners who may be eligible for Chapter 61A or 61B or who might be interested in conservation restrictions. (Ongoing)

### GOAL II

MEET CURRENT AND FUTURE NEEDS  
FOR RECREATION PROGRAMS AND FACILITIES FOR RESIDENTS

#### 1) Provide Additional Facilities for Use by Senior Citizen Walking Programs

The need for safe and pleasant walking trails for senior citizens was identified. The Council on Aging initiated a walking program this summer for senior citizens. Although adequate trails exist in nearby communities, the program has had difficulty locating acceptable trails in Hanover. The Town may want to explore a cooperative funding effort with the Council to upgrade particular trails of interest. (1988)

2) Review SCORP Plan

The state currently is in the process of updating the State Comprehensive Outdoor Recreation Plan (SCORP). This plan will be completed in 1988 and will focus on the issue of supply and demand for various types of active and passive recreation. The Conservation Commission should plan to obtain copies of the report and review it for the guidance it may offer in planning for future recreation and open space needs. (1988)

GOAL III

PRESERVE THE HISTORIC VALUE OF KNOWN SITES WITHIN THE TOWN

1) Coordinate with the Historical Commission

The Conservation Commission should continue to work with the Hanover Historical Commission on the establishment of an Historic District.

2) Investigate Historic District Bylaws

The establishment of a Local Historic District is only one step in protecting historic sites. Developing a Local Historic District Bylaw can further protection of historically-significant properties. Under a Local Historic District, the Historic District Commission reviews all applications for exterior changes to buildings. The Conservation Commission should assist the Historic Commission in writing a bylaw to establish review criteria for this district. (1991)

GOALS IV AND V

PLAN FOR THE CONTINUED GROWTH OF THE COMMUNITY  
AND THE INTEGRATION OF OPEN SPACES WITH URBAN DEVELOPMENT

1) Land Acquisition

a) North Hanover

Large sections of this neighborhood are still forested. Landowners should be encouraged to consider applying for Chapter 61. Forested parcels adjacent to Shinglemill and Longwater Brooks should be given a higher priority for acquisition and protection. Lands adjacent to the Curtis School should also be considered. (Ongoing - medium priority)

b) Walnut Hill

The southeastern portion of Walnut Hill lies within the Aquifer Protection District. Lands within the Aquifer Protection District should be considered for protection under Chapter 61 or for acquisition. (Ongoing - high priority)

c) Hanover Four Corners

Large portions of this neighborhood are within the Aquifer Protection District. In addition, there are two Well Protection Zones. Lands within the Well Protection Zones should be targeted for acquisition by the Town, with interim protection by enrollment under Chapter 61 if eligible. The acquisition of land at, or near the confluence of the Third Herring Brook and North River should be considered to provide additional canoe access. (Ongoing -high priority)

d) South Hanover

This area contains two parcels assessed under Chapter 61. The Lewald/McBain parcel is adjacent to the Indianhead River and should be given a higher priority for protection and acquisition. (Ongoing - medium priority)

e) Indian Village/Fireworks

The portion of the Indian Village neighborhood north of Myrtle Street has only one small parcel of conservation land. One parcel south of Circuit Street (Denham), is assessed under Chapter 61. The town should encourage other property owners to consider Chapter 61. (Ongoing - medium priority)

f) West Hanover

This neighborhood appears to have sufficient conservation land. No additional acquisitions are recommended.

g) Hanover Center

Hanover Center has less conservation land than other neighborhoods. A large portion of the land area falls within the Aquifer Protection District, including a well protection zone. High priority should be given to identify potential parcels for acquisition in this area. (Ongoing - high priority)

2) Coordinate with the Plymouth County Wildlands Trust

Discussions should be initiated with the Plymouth County Wildlands Trust concerning parcels of mutual interest for possible acquisition by the Trust (1988). Although the Trust does not have funds available to purchase land, it does receive deeds to properties through donations.

3) Study the Feasibility of Cluster Zoning

Currently 37 communities in the MAPC region permit cluster zoning, including Braintree, Cohasset, Duxbury, and Marshfield. The Growth Policy Committee may want to talk with these towns to ascertain the experiences of other towns and to determine if cluster zoning is a feasible method for protecting open space in Hanover. (1988)



4) Study Town's Additional Growth Potential as a Result of Installation of Sewage Package Treatment Plants

The use of sewage package treatment plants to develop lands once considered inadequate (due to Title Five Soil Percolation requirements) may increase a community's proportion of developable land. As a result, land once assumed to be permanent open space may no longer be protected from development due to its natural geography and soil conditions. Thus, the Town of Hanover may want to determine what, if any, parcels could be developed with the construction of an on-site package treatment plant. The Town then may want to develop appropriate bylaws to control the construction and use of these plants based on the community's concerns.

5) Explore other Growth Management Techniques

The Growth Policy Committee may wish to obtain a copy of MAPC's Growth Management Catalog to assist it in evaluating the range of growth management techniques that are available. (1988)

6) Recognize Landowners Who Have Made Donations of Land

In order to encourage future land donations, the Conservation Commission should publicly recognize landowners who have donated property. (1988)

7) Prepare Leaflet for Property Owners on Tax Advantages

Prepare a leaflet on the tax benefits of Chapter 61, 61A, 61B, conservation restrictions, and gifts of land for distribution to town residents. Enclosing a leaflet and return postcard to indicate interest in further information with a tax bill is one efficient method of dissemination. (1989)

8) Follow-up with Interested Property Owners

Arrange for some type of follow-up for property owners who indicate an interest in restricting or donating their land. This could take various forms including a workshop sponsored in conjunction with other South Shore Coalition communities. (1990)

9) Study the Feasibility of Implementing a Land Bank Bill

A Land Bank Bill that would enable municipalities to establish a real estate transfer tax to provide funds for open space and affordable housing is currently under consideration by the State Legislature. A report published by the Massachusetts Affordable Housing Alliance provides statistics on the potential local revenue from such a tax under various options. Based on data for 1985, Hanover would have earned revenues of \$74,000 - \$797,000, depending on the percentage of the tax and exemptions allowed. The Conservation Commission should track the legislation and study the feasibility of implementing a Land Bank to provide funding for open space acquisition. (1988)

10) Involve the Business Community in Open Space Preservation

The Conservation Commission should distribute copies of the Open Space Plan to the business community. This should be followed up by inviting business leaders to meet with the Commission to discuss ways in which area businesses can assist the Town in meeting its open space goals. (1988)

GOAL VI

ESTABLISH COOPERATION AMONG ALL TOWN BOARDS AND DEPARTMENTS IN  
PREPARING FOR FUTURE GROWTH DEMANDS

1) Distribute Open Space Plan

The Conservation Commission should distribute copies of the Open Space Plan to all relevant town boards and should discuss the plan with them. This will help ensure that every board understands the open space goals and its role in meeting those goals. (1987)

2) Involve Town Planner

The Town of Hanover employs a local planner on a part-time basis through a cooperative arrangement with the Town of Hanson. The local planner could play an important role in the management and planning of open space through coordinating different town board activities, coordinating the land management committee, if formed (see recommendation 5 of Goal VII), and targeting and facilitating the acquisition of properties. In order to provide enough staffing time to implement the above efforts, the Town of Hanover may need to consider hiring a local planner on a full-time basis in the near future.

GOAL VII

IMPROVE THE MAINTENANCE AND ACCESSIBILITY  
OF OPEN SPACE AREAS

1) Concentrate Maintenance and Management Support on Selected Parcels of Conservation Commission Land

Conservation land can serve two equally valid purposes; resource protection and passive recreation. Passive recreation can be defined as recreation that is low-intensity and does not require extensive facilities. It includes activities such as hiking, fishing, and nature study. Conservation land generally serves both purposes but the use of conservation land for passive recreation does create problems of policing, liability, maintenance, and development costs. Therefore, selecting a few parcels that are suitable for passive recreation and concentrating support on those parcels can help ease the burden of proper maintenance while still providing areas for public use. The parcels should be dispersed throughout the Town to serve various neighborhoods, should contain some feature to attract users (such as water) and should avoid the most environmentally sensitive areas such as aquifer protection land. (Ongoing)

2) Develop a Prioritized List of Maintenance Needs

Given the limited availability of funds and personnel to conduct extensive maintenance efforts on all Conservation Commission properties, a prioritized list of maintenance needs should be developed. This list should focus on those parcels selected for passive recreational use and should identify the items most important to improving access to those parcels. The list should be developed with the DPW officials responsible for maintenance. The Conservation Commission also should work with the DPW to establish guidelines for maintenance on all environmentally sensitive lands to ensure the implementation of consistent maintenance practices on all town-owned property. (1988)

3) Reinstate the Program of Walks on Conservation Land

The Conservation Commission should consider reinstating the program of holding walks on conservation land. This will help increase citizen awareness of available open spaces and build support for the Conservation Commission's programs. (1989)

4) Distribute Copies of the Open Space Map

Widespread distribution of the open space map will enable more residents to take advantage of the resources available. (1988)

5) Form a Land Management Committee to Assist the Conservation Commission

The Conservation Commission's time is taken up almost completely by project reviews, leaving little time to address issues of land maintenance, acquisition, and public education. The creation of an elected or appointed committee to oversee these additional responsibilities should be considered. The hiring of an additional staff person to manage conservation land would enhance the work of this committee. (1988)

6) Post Signs at all Conservation Parcels

Signs denoting Conservation Commission-owned land should be posted on each parcel. The posting of signs will serve to: 1) improve public awareness and 2) minimize the potential for claims of adverse possession by adjacent property-owners who may be unaware of the boundaries of conservation lands. However, signs should be posted in a manner that deters vandalism or theft. (1989)

ADDITIONAL RECOMMENDATIONS

1) Update the Open Space Plan

The Conservation Commission should initiate the update of the 1988 Open Space Plan to ensure that eligibility for Division of Conservation Services programs does not lapse. (1992)

2) Coordinate Efforts with Surrounding Towns

The Conservation Commission should initiate meetings with the conservation commissions of surrounding towns in order to begin to work together on open space issues of regional concern and benefit. (Ongoing).



## VII. IMPLEMENTATION TECHNIQUES

### A. Introduction

The public acquisition of conservation land is only one way to preserve and protect open space. There are many other ways to protect open land, town character, and environmental features. Acquisition is not always the most appropriate or cost-effective method. This section will describe a variety of techniques available, including those already being used in the Town and those that might be tried in the future. The purpose of this section is to make decision-makers and town residents aware of the many different ways to preserve open land.

### B. State and Federal Funding Programs

The Self-Help Program - This program, administered by the Division of Conservation Services, provides for up to 80% reimbursement of the costs of acquiring land for conservation and passive recreation. In order to be eligible, a municipality must have an established conservation commission and must have an open space/conservation and/or recreation plan approved by the Division of Conservation Services. The purpose of this program is to preserve lands and waters in their natural state. The funds cannot be used to develop recreational facilities.

The Urban Self-Help Program - This program, administered by the Division of Conservation Services, provides funding to cities and urban towns for reimbursement of up to 90% of the cost of acquiring land for park and recreation purposes. The funds may also be used to develop outdoor recreational facilities. In order to be eligible, a city or town must have a Park or Recreation Commission and a conservation commission, as well as an open space/recreation plan approved by the Division of Conservation Services.

The Land and Water Conservation Fund Program - This is a federal program that is administered in Massachusetts by the Division of Conservation Services. The program allows for reimbursement of up to 50% of the costs of acquiring and/or developing land for outdoor recreation. Projects must be consistent with the SCORP (Statewide Comprehensive Outdoor Recreation Plan).

Agricultural Preservation Restrictions (APR) - The APR Program was begun in 1977 to protect the state's diminishing farmland. Under this program, the Department of Food and Agriculture (with or without financial assistance by the town) purchases the development rights to a farm. A private, non-profit organization may also acquire an APR. The program is voluntary and is initiated by the landowner by filing an application with the Department of Food and Agriculture. The review process includes field inspection, screening, and selection based on set criteria and appraisals. The Agricultural Lands Preservation Committee determines what final action should be taken. The conservation commission must also review the application and make a recommendation to that committee.

If approved, the state (and in some cases, the town) acquires deed restrictions that run in perpetuity. The restriction prohibits all activities that would impair the land for farming. The farm remains privately owned and the owner retains the right to privacy, the right to sell or lease the land, and the right to farm. However, the landowner cannot be required to continue to farm. There is no public access required except for the state's right to enforce the restriction.

The state evaluates the farms for inclusion in the program based on the following criteria:

- 1) quality of soils for agricultural production;
- 2) the extent to which the farm is threatened by development pressure;
- 3) whether the farm has any statewide significance;
- 4) the degree to which the farm is isolated or is near other farms in the APR Program.
- 5) the operations and management of the farm;
- 6) whether the farm meets the eligibility requirements for inclusion in the Chapter 61A program.

An APR cannot be released unless the holder, the Commissioner of Food and Agriculture, and the selectmen consent, after a public hearing, or by a two-thirds vote of the legislature. The owner also must repay a sum equal to the market value of the APR at the time of release. As long as the land is actively farmed it will be assessed at the rates set for the Chapter 61A program. State and federal taxes also are lowered due to the loss of development potential.

Currently the APR program covers 13,000 acres of land in 134 farms. The value of these farms is \$21,013,410. The original \$30 million appropriated for this program has been spent or is committed. Applications are being accepted and approved subject to the availability of future funding.

### C. Other Land Preservation Techniques

#### Chapters 61, 61A, and 61B

These three statutes, discussed briefly in Chapter II of this plan, provide a way for land owners to reduce property taxes on eligible farm and forest land. This lowered tax assessment also serves to keep these lands undeveloped. Both of these programs are voluntary and are entered into at the will of the property owner. This section, reprinted from the publication "Charitable Gifts of Land and Conservation Restrictions" briefly outlines the requirements and responsibilities involved in participation in these two programs.

## Chapter 61: Forest Land

- . The landowner must enroll at least 10 contiguous acres of forest not developed for non-forest use.
- . The landowner must furnish a 10-year forest management plan prepared by a professional forester. A state forester will review the plan and visit the property before certifying eligibility.
- . The state-certified plan is then submitted to the local assessor for a special forestland classification. Classified land is assessed at 5% of its fair market value, with a \$10 minimum assessed value. The normal town tax rate is applied to find the amount of property tax due.
- . The landowner must pay a "products tax" equal to 8% of the stumpage value of wood products harvested during the eligibility period and for two years prior to eligibility.
- . If the landowner withdraws from the program or fails to comply with the management plan, he must repay all taxes which were saved while in the program (up to 10 years), plus interest. The penalty will not apply if the owner sells the property, and the new owner agrees to assume the burdens and benefits of the program. However, the town is given a 120-day right of first refusal to purchase the property, if it wishes to match the purchase offer.

## Chapter 61A: Agricultural and Horticultural Land

- . The land must be actively devoted to agricultural or horticultural uses during the present tax year and for the previous two tax years. Agricultural and horticultural uses include raising animals, food for human or animal consumption, tobacco, flowers, plants, and shrubs or forest products for sale in the regular course of business.
- . The landowner must enroll at least 5 acres, and show gross sales of at least \$500 per year in agricultural/horticultural products, plus \$5.00 per acre for each acre over 5 (50 cents per acre if wetland or woodland).
- . A conveyance tax is due if the owner sells the property for use other than in agriculture or horticulture, or if the use is changed by the owner within 10 years. The tax equals 10% of the total sales price in the first year, 9% in the second year, 8% in the third year, and so forth. No conveyance tax is due if the land is sold for and retained in agricultural or horticultural use.



- . If enrolled land ceases to become eligible, owner must repay all taxes saved during the current and preceding four tax years. If the conveyance tax is greater than the rollback tax, the owner pays the former (but not both).
- . In the event of a proposed sale, the town has a 120-day right of first refusal to match the purchase price. If it elects to make the purchase, no conveyance tax or rollback tax is due.
- . All buildings and houselots are assessed normally.

(Source: Charitable Gifts of Land and Conservation Restrictions: A Landowner's Guide to Massachusetts and Federal Tax Incentives, by Cartland Bacall and Darby Bradley; The Essex County Greenbelt Association and The Trustees of Reservations, 1984)

#### Chapter 61B: Recreational Land and Open Space

- . Chapter 61B relates to the classification and taxation of recreational lands. To qualify, a parcel must be at least five acres and must remain in a natural, wild, or open condition or be devoted to recreation.
- . Recreational uses include hiking, camping, nature study, boating, golfing, horseback riding, hunting, fishing, skiing, swimming, picnicking, flying, archery, and target shooting.
- . The valuation of land under Chapter 61B shall not exceed 25% of its fair cash value.
- . There are provisions similar to Chapter 61 and 61A for paying roll-back taxes when the use changes. The municipality has a 180 day right of first refusal period (as opposed to 120 days for Chapter 61 and 61A) when the land is put up for sale.

#### Conservation Restrictions (CR)

A Conservation Restriction is a legally binding agreement between a land-owner and a public agency or non-profit land trust, where the land-owner agrees to keep the land undeveloped and in its natural state. CRs can be a good alternative to fee simple acquisition of land. However, if a restriction is sought involving the limited use of buildable land, the cost of a restriction may equal the cost of fee simple acquisition. CRs are useful when an undisturbed green belt is desired along streams or other natural features. A CR can take the form of a scenic easement to prevent development on ledges, hilltops, or fields to preserve views. Short-term restrictions (of 10-30 years) also are permitted by the Conservation Restrictions Act and can help a town control growth and allow it to plan for land acquisition in advance of a property coming on the market.

Property owners, as well as conservation commissions, can benefit from CRs. However, many landowners who are interested in open space preservation may not fully understand the financial benefits, responsibilities, and requirements for granting a conservation restriction. It is important to note that the tax implications of a CR are somewhat complicated, and this brief discussion cannot take the place



of professional advice. Many of the benefits described here pertain to charitable gifts of land as well. A more detailed discussion of these issues can be found in the publication entitled "Charitable Gifts of Land and Conservation Restrictions: A Landowner's Guide to Massachusetts and Federal Tax Incentives."

A conservation restriction can reduce federal income taxes, federal and state capital gains taxes, local property taxes, and estate and gift taxes. Massachusetts does not allow a deduction in state income taxes for CRs. The tax savings is dependent on the value of the property being restricted. This is usually determined by calculating the difference in value before and after the restriction. This should be done by a qualified appraiser familiar with the Internal Revenue Code.

If a partial interest in land such as a conservation restriction is to qualify for tax benefits, it must be for a bona fide conservation purpose in accordance with Internal Revenue Service guidelines. Since the municipality and the state Division of Conservation Services must review and approve all perpetual conservation restrictions, this approval usually satisfies IRS guidelines.

Public access to the restricted land is not required although it does help to fulfill the requirement that the restriction provide a public benefit. A land-owner who allows public recreational use and does not charge a fee is not liable for injuries to persons or property under Chapter 21, Section 17C of the Massachusetts General Laws. Landowners should be aware that a restriction can only be released after a public hearing and with the approval of the holder, the town meeting, the Division of Conservation Services, and the Secretary of the Executive Office of Environmental Affairs.

#### Land Banks

A potential new tool for funding open space acquisition is currently being considered by the State Legislature. The Land Bank Bill, if passed, would allow municipalities the option of establishing land banks funded by a tax on real estate sales. The bill is patterned after the Nantucket Land Bank legislation which was passed in 1983. The bill is still being debated and revised, but the basic principals are as follows: 1) Each city or town would have the option of approving the land bank concept by a town meeting vote. 2) A tax of up to 1% would be imposed on real estate sales. 3) The city or town could vote to exempt a certain amount of any real estate sale from the fee. 4) The funds could be used for acquisition, planning or management of open space land and would be administered by the conservation commission or a Land Bank Commission. The legislation currently under consideration also mandates that a certain percentage of funds collected be spent on affordable housing. Until such time as the legislation is acted on, the Land Bank option should be considered a future implementation technique which may become available to the town.

#### Land Trusts

Many towns in the metropolitan Boston area have private, non-profit land trusts. Some of the South Shore towns with land trusts include Cohasset, Hingham, and Scituate, as well as the Plymouth County Wildlands Trust. A non-profit, tax exempt land trust may own land, acquire conservation

restrictions, receive gifts of land and money, and raise funds. A land trust can often raise money and acquire land faster than a conservation commission and therefore can be important in securing land which comes on the open market. There are national and regional land trusts which will provide assistance to local groups trying to set up a land trust.

### The Scenic and Recreational Rivers Act

This law gave the Department of Environmental Management the authority to adopt orders regulating land uses along certain rivers and streams. The North River was chosen as a demonstration project. The Protective Order for the North River was adopted in 1979 and was written with the assistance of a local citizens advisory committee. The Protective Order is administered by the North River Commission which is composed of selectmen and designees from each town. The order applies to a 300-foot corridor extending inland from the natural bank of the river.

The Protective Order is similar to a zoning bylaw in that it establishes allowed uses, uses requiring a special permit (from the North River Commission) and prohibited uses. The allowed uses include residential, forestry, agriculture, recreation, and utilities. Uses such as marinas, dredging, wildlife impoundments, beach construction, and temporary educational or scientific structures and certain residential developments are allowed by special permit if they will not degrade water quality, alter wetlands, result in erosion, obstruct navigation, or impair the scenic and recreational value of the river. Other uses such as industry, mining, landfills, commercial buildings, and dams are prohibited.

Applications for special permits are made after the filing of applications for all other local town permits and approvals. The North River Commission holds a public hearing after which it grants, denies, or conditions a special permit. The Protective Order also sets forth site design criteria and vegetative cutting standards, and regulates pesticides, fertilizers, erosion control, and septic tank use.

The Scenic Rivers Program affords another level of protection through involvement of the staff in the various environmental review processes. Projects which come under the jurisdiction of the Massachusetts Environmental Policy Act (MEPA) process, the A-95 review, the Army Corps of Engineers permitting program, and others are reviewed by the staff for their impacts on the river.

### Transfer of Development Rights

A TDR program is a regulatory technique that influences the location of development and compensates for the inequities that may arise when the use of property is restricted due to land-use regulations. A TDR program separates the right to develop a parcel of land from that particular property and allows that right to be transferred to another parcel of land. This is done by designating the area to be preserved as the "sending zone" and the area to be developed as the "receiving zone." A property owner in the sending zone can sell development rights to a property owner in a receiving zone. This technique is relatively new and can be difficult to implement, but it has been used in Concord, Bedford, and Falmouth.

APPENDIX A

HANOVER OPEN SPACE PLAN UPDATE  
GOALS AND NEEDS SURVEY

HANOVER OPEN SPACE PLAN UPDATE  
GOALS AND NEEDS SURVEY

A. Introduction

The purposes of this survey are to develop goals and objectives for the Hanover Open Space Plan and to assess the town's open space and conservation needs. This information is essential for developing the plan. Please take some time to review this survey and answer all the questions. The survey should be filled out by the group as a whole and should represent the consensus opinion of your group rather than individuals. However, if there are differing opinions, these should be noted in the section for comments. Please note that the Hanover Open Space Plan Update will include only conservation and passive recreation. If you have goals, objectives or opinions on active recreation needs and wish to include them, please do so; they may be useful to other town officials or groups. However, this survey is intended primarily to assess conservation and passive recreation concerns; responses regarding active recreation concerns will not factor in the plan update findings and recommendations.

B. Goals and Objectives

The importance of goals and objectives - A goal is a broad statement of purpose; an objective is a more specific statement of how to achieve or advance toward that purpose. Goals and objectives give focus to a planning study. They are most important in developing recommendations. A statement of goals and objectives is one of the items required by the state Division of Conservation Services in an approved open space plan.

Review of Goals and Objectives from the 1979 Plan - The attached form is a copy of the goals and objectives taken directly from the July 1979 Hanover Open Space Plan. To the right of the goals and objectives there are three columns which should be filled out as follows:

Column A: In your opinion, what progress has been made toward achieving the overall goal and each of the objectives?

Column B: In your opinion, are the goals and objectives still valid?

Column C: For the goals and objectives which you consider to be still valid, what priority should each now be given?

Additional Goals and Objectives - On page 5 of the survey form, please list any additional goals and objectives that you feel should be considered in the 1987 Open Space Plan.



## GOALS AND OBJECTIVES

### Goal I

Protect the integrity of wetlands, watersheds, existing and potential aquifers, groundwater recharge areas, ponds, streams, and floodplains.

#### Objectives:

- (a) Identify existing sources of water pollution and employ the best means for eliminating the sources in order to maintain water resources that can serve multi-purposes.
- (b) Identify potential pollution problems and plan for the best means to avoid them through town by-laws or regulations.
- (c) Provide protection of areas designated as significant groundwater areas.
- (d) Create incentives for providing for and/or maintaining suitable vegetative cover in wetland areas.
- (e) Control by acquisition or restrictive easement the uses of wetlands (including ponds and streams) within the town.

### Goal II

Prepare for satisfaction of current and future needs for recreation programs and facilities for residents of our community.

#### Objectives:

- (a) Plan for acquisition and development of outdoor recreation facilities to accommodate neighborhood populations.

| Status        | Consideration for 1987 Plan |                      |                 |      |
|---------------|-----------------------------|----------------------|-----------------|------|
|               | A                           | B                    | C               |      |
| No Progress   |                             | No Longer Valid Goal | Still Valid     | High |
| Some Progress |                             |                      | Priority Medium | Low  |
| Achieved      |                             |                      |                 |      |

- (b) Consider recreation activities that are lacking or inadequate and plan for future integration into the community, depending on public desire.
- (c) Develop or improve existing recreation facilities.
- (d) Prepare for recreation programs and facilities for use by all age groups.
- (e) Provide for special needs programs utilizing existing and future recreation facilities.

Preserve the historic value of known sites within the town.

(a) Cooperate with the Historical Society and any other interested parties to restore, preserve, and contribute to rehabilitation efforts for areas known to be of historical significance to the town.

- (b) Attempt to acquire land or restrictive easements for areas that have known historical or scenic significance.

Plan for the integration of open space uses with urban development for the benefit of all interests in the community.

(a) Structure open space to harmonize with areas of urban development.

|  | Status      |               | Consideration for 1987 Plan |                      |             |                             |
|--|-------------|---------------|-----------------------------|----------------------|-------------|-----------------------------|
|  | No Progress | Some Progress | Achieved                    | No Longer Valid Goal | Still Valid | Priority<br>High Medium Low |
| <p><u>Goal V</u></p> <p>Prepare for continued growth of the community in a planned systematic fashion that can accommodate the needs of the citizens and maintain the resources that are attractive to residents.</p> <p><u>Objectives:</u></p> <p>(a) Prepare a comprehensive plan for controlled growth.</p> <p>(b) Solicit citizen participation in preparing for future growth and development.</p> <p>(c) Consider all citizen input.</p> |             |               |                             |                      |             |                             |
|  |             |               |                             |                      |             |                             |
|  |             |               |                             |                      |             |                             |
|  |             |               |                             |                      |             |                             |
|  |             |               |                             |                      |             |                             |
| <p><u>Goal VI</u></p> <p>Establish cooperation among all town boards and departments in preparing for future growth demands.</p>   |             |               |                             |                      |             |                             |

Objectives:

- (a) Evaluate demands on town natural resources, including all aspects such as soil types, water demands, runoffs, sewage disposal from industrial, commercial, and business land use in order to minimize the impact of the land use on the natural resources of the town.
- (b) Review of existing by-laws and regulation by all town boards and departments to ascertain areas that need to be coordinated for the optimum protection of interests of the town.
- (c) Establish a Groundwater Protection District which would be an overlay district superimposed on all underlying districts, with land uses subject to certain use-restriction and/or procedures.

| Status      |               | Consideration for 1987 Plan |                      |             |                 |
|-------------|---------------|-----------------------------|----------------------|-------------|-----------------|
| No Progress | Some Progress | Achieved                    | B                    |             | C               |
|             |               |                             | No Longer Valid Goal | Still Valid |                 |
|             |               |                             |                      | High        | Priority Medium |
|             |               |                             |                      |             | Low             |



## ADDITIONAL GOALS AND OBJECTIVES

### C. Open Space and Conservation Needs

A statement of community open space and conservation needs is required by the state in all open space plans which it approves. This portion of the survey is designed to give you the opportunity to indicate what you feel are the most important current and future open space and conservation needs. These questions are meant to help you think about open space needs but do not cover all topics. Please feel free to comment on other areas in Question 10.

1) What types of land do you think the town needs to acquire/protect in the future? Please indicate whether the acquisition or protection (through conservation restrictions, zoning, easements, etc.) is a high, medium or low priority.

Priority for  
Acquisition

Priority for  
Protection

Wetlands  
Woods  
Agricultural land  
Open fields  
Developable land  
Scenic views  
Water bodies  
Floodplains  
Cultural/historic sites  
Aquifer recharge areas  
Wildlife habitats  
Other (please specify)

2) Do you think there should be more or fewer opportunities for passive recreational use of town conservation land?

3) In general, which activities do you think are most needed on town conservation land? (Circle all that apply.)

- a) Hiking/nature/horseback trails (Circle all that apply).
- b) Jogging trails
- c) Bikepaths
- d) Boating
- e) Fishing
- f) Picnicking
- g) Swimming
- h) Other (Please specify) \_\_\_\_\_

4) Are there specific improvements to parcels of town-owned conservation land that you would like to see?

Parcel

Improvements

5) Does access to existing parcels of conservation land need to be improved? Please list specific needs.

6) In your opinion, are most town residents aware of the existence of town conservation land? Please specify parcels that may not be well-known.

7) Is there a need to educate town residents further about the availability and value of open space and conservation lands?

8) Are you aware of any specific groups (senior citizens, young children, handicapped) who have expressed a need or desire for specific facilities or programs? Please explain.

9) Is the maintenance of existing conservation land adequate? Are there specific management and maintenance needs that you are aware of? Please be specific.

10) Please indicate any other open space and conservation needs of which you are aware.

APPENDIX B  
OPEN SPACE INVENTORY



TOWN OF HANCOCK  
INVENTORY OF OPEN SPACE LANDS

| PARCEL NAME                     | ACCESS                   | OWNERSHIP            | MANAGEMENT           | ACRES  | ZONING | MAP # | DESCRIPTION/COMMENTS/RESTRICTIONS  |
|---------------------------------|--------------------------|----------------------|----------------------|--------|--------|-------|--|
| NORTH HANCOCK/ASSINIBOIA        |                          |                      |                      |        |        |       |  |
| Main Brook Swamp                | None                     | Town                 | Cons. Cooa.          | 9.46   | Res.   | 1     | Wooded swamp and wetland contiguous to Main Brook.                                     |
| Unincorporated                  | None                     | Town                 | Cons. Cooa.          | 2.87   | Res.   | 2     | Wood and shrub covered wetlands.   |
| Unincorporated                  | None                     | Town                 | Cons. Cooa.          | 12.51  | Res.   | 3     | Wooded wetland.  |
| Norman Cemetery                 | None                     | Town                 | Cons. Cooa.          | 8.18   | Res.   | 4     | Wooded wetland.  |
| Shoalwater Brook Swamp          | Webster St.              | Town                 | Cons. Cooa.          | 9.35   | Res.   | 5     | Red maple swamp.   |
| Finer                           | Whiting Street           | Town                 | Cons. Cooa.          | 26.35  | Res.   | 6     | Mixed woodlands, pine grove, former pasture and wetlands.                              |
| Main Brook Lot                  | None                     | Town                 | Cons. Cooa.          | 19.42  | Res.   | 7     | Wetlands and floodplain zoning in effect.  |
| Fairbairn                       | Webster St.              | Town                 | Cons. Cooa.          | 1.1    | Cooa.  | 39    | Wooded wetlands. Adjacent to Norman Town line.   |
| Water retention area            | Shoalwater Brook         | Cons. Cooa.          | Cons. Cooa.          | 4.35   | Res.   |       | Conservation restriction for water retention area.                                     |
| Curtis School Field             | Main St.                 | Town                 | Rec. Dept.           | 3      | Res.   |       | Cleared land with facilities for softball, baseball.                                   |
| Curtis School                   | Main St.                 | Town                 | School Dept          | 3      | School |       |  |
| Union Cemetery                  | Webster St.              | Town                 | DPW                  | 1.72   | Res.   |       | Cemetery dating back to the 1800 s.  |
| Halletts Pond                   | Pond Drive               | Town                 | Selection            | 0.5    | Res.   |       | Ice skating and fishing. Dam on pond.  |
| 5. Shore Natural Science Center |                          |                      |                      |        |        |       |  |
| WEST HANCOCK                    |                          |                      |                      |        |        |       |  |
| Colby Phillips                  | Whiting and Circuit Sts. | Town                 | Cons. Cooa.          | 123.27 | Res.   | 8     | Path network, natural slating area, historic cemetery, wetlands and floodplain zoning. |
| Main Street                     | Main St. and Tupper Rd.  | Town                 | Cons. Cooa.          | 54.16  | Res.   | 9     | Former firework's property, diked trails.  |
| Swamp Street                    | Swamp St.                | Town                 | Cons. Cooa.          | 102.42 | Res.   | 10    | Wetlands along Drinkwater River and Longwater Brook.                                   |
| Five Island Swamp               | None                     | Town                 | Cons. Cooa.          | 4      | Res.   | 12    | Low, wet, wooded swamp. Mixed deciduous. No shooting, trapping, motor vehicles.        |
| Five Island Swamp Old Farm Rd.  |                          | Town                 | Cons. Cooa.          | 12.78  | Res.   | 13    | Mixed deciduous woodland.  |
| Cedar Elm Sch.                  | Cedar St.                | Town                 | School Dept          | 55.08  | School |       | 10 acres of playing fields, parking, 45 acres devoted to cross-country trail.          |
| Jr. High School                 | Whiting St.              | Town                 | School Dept          | 45     | School |       | Ballfields, track, cross-country slating.  |
| High School                     | Cedar St.                | Town                 | School Dept          | 22.4   | School |       | Playing fields, tennis, basketball, track.   |
| Ellis Field                     | Yino St.                 | Town                 | Fair's Dept.         | 12.6   | Res.   |       | Baseball fields, playground, picnic area.  |
| Darling Cemetery                | Circuit St.              | Town                 | DPW                  | 0.12   | Res.   |       | Cemetery dating back to the 1800 s.  |
| Palor                           | Circuit St.              | Palor                | Palor                | 14.75  | Res.   |       | Restriction under Chapter 61 - Forest Management Act. No public access.                |
| D. Macdonald Petroni            |                          | D. Macdonald Petroni | D. Macdonald Petroni | 11.2   | Res.   |       | Restrictive Covenant. No construction allowed.   |

TOWN OF HANOVER  
INVENTORY OF OPEN SPACE LANDS

WILMOT HILL

| FARCEL NAME                      | ACCESS                       | OWNERSHIP     | MANAGEMENT   | ACRES | ZONING | NOTES | DESCRIPTION/COMMENTS/RESTRICTIONS  |
|----------------------------------|------------------------------|---------------|--------------|-------|--------|-------|--|
| Herli Swann                      | Union St.                    | Town          | Cons.Cons.   | 87.25 | Res.   | 79    | Wooded swann. Portion of site is subject to deed restriction. Also fraction Edison easement. No hunting. |
| Third Herrino<br>Front Area      | None                         | Town          | Cons.Cons.   | 4.2   | Res.   |       | Floodplain and wetlands zoning. Wooded swann adjacent to well site.                                      |
| Olinpham/Old<br>Town Way         | None                         | Town          | Cons.Cons.   | 5     | Res.   | 28    | Mixed hardwoods, pine, high ground, some wetlands.   |
| S. Shore Regional<br>High School | Webster St/<br>S. Shore Sch. | S. Shore Sch. | S. Shore Sch | 45    | Res.   |       | Trade school.  |
| Walnut Hill Tent                 |                              | Town          | DPW          | 2.12  | Res.   |       | High point in town. Restricted for water supply use.   |
| Union St. Tanks                  | Union St.                    | Town          | DPW          | 1.2   | Res.   |       | Restricted for water supply use.   |
| Pond St. Area                    |                              | Town          | DPW          | 35.38 | Ind.   |       | Restricted for water supply. Recreation allowed with permission of the DPW.                              |
| HANOVER CENTER                   |                              |               |              |       |        |       |  |
| Willow Road Site                 | Willow Road                  | Town          | Cons.Cons.   | 8.15  | Res.   | 17    | Young pine. Unmarked trail system. Partition on Willow Road.   |
| Banner/Henderson                 | Old Washington               | Town          | Cons.Cons.   | 6.2   | Res.   | 33    | Wooded upland.   |
| Fl-mouth St.                     | Fl-mouth St.                 | Town          | Cons.Cons.   | 2.9   | Res.   | 34    | Front with bordering vegetated wetland and red oxide swann.  |
| Hanover Cemetery                 | Silver St.                   | Town          | DPW          | 39.4  | Res.   |       | Active cemetery.   |
| Hanover St. Wells                | Hanover St.                  | Town          | DPW          | 21.21 | Res.   |       | Important water supply source.   |
| Silverster School                | Hanover St.                  | Town          | School Dept  | 21    | School |       | Grassy area with playing fields and parking. playground.   |
| Silverster Field                 |                              | Town          | Paris Dept   | 10.5  | Res.   |       | Active recreational facilities.  |
| Center School                    | Silver St.                   | Town          | School Dept  | 13.2  | School |       | Playing fields, basketball, playground.  |
| Briggs F & E                     | Hanover St.                  | Briggs        | Briggs       | 21.23 | Res.   |       | Restricted under Chapter 61- Forest Mgt. Act. No public access.  |
| Briggs F & L                     | Hanover St.                  | Briggs        | Briggs       | 13.22 | Res.   |       | Restricted under Chapter 61- Forest Mgt. Act. No public access.  |
| Rustow Park                      | Willow Rd.                   | Town          | Selection    | 8.15  | Res.   |       | Mixed woodlands. Restricted to camping for Boy Scouts.   |
| Stetson House                    | Hanover St.                  | Town          | Special      | 2.92  | Res.   |       |  |
| Briggs Field                     |                              | Town          | Paris Dept   | 1.17  | Res.   |       | Baseball field.  |

| TOWN OF HANOVER<br>INVENTORY OF OPEN SPACE LANDS  |                 |               |             |       |        |      |
|---|-----------------|---------------|-------------|-------|--------|------|
| PARCEL NAME   | ACCESS          | OWNER/SHR     | MANAGEMENT  | ACRES | ZONING | DATE |
| NORTON VILLAGE  |                 |               |             |       |        |      |
| Fireworks Property, 1100 St.  |                 | Town          | Cons.,Comm. | 130   | Res.   | 14   |
| Hillside Drive  | Hillside Drive  | Town          | Cons.,Comm. | 1.06  | Res.   | 15   |
| Hanson/Hanover Dam  | Drumwater River | Towns, Hanson | Cons.,Comm. | 0.2   | Res.   | 16   |
| Clark's Land  | 1100 St.        | Town          | Cons.,Comm. | 56.42 | Res.   | 11   |
| Mettle Field  | Mettle St.      | Town          | Paris Deal  | 72    | Res.   |      |
| Circuit St. Land  | Circuit St.     | Town          | Selection   | 1.33  | Res.   |      |
| School St. Land   | School St.      | Town          | DPW         | 0.25  | Res.   |      |
| Mun. Garage   |                 | Town          | DPW         | 11.6  | Ind.   |      |
| Debnah Property   | Circuit St.     | Debnah        | Debnah      | 21.23 | Res.   |      |
| SOUTH HANOVER   |                 |               |             |       |        |      |
| Church/Hanson   | Broadway        | Town          | Cons.,Comm. | 4.4   | Res.   | 35   |
| Tindale Road Addition   | Tindale Road    | Town          | Cons.,Comm. | 0.1   | Res.   | 37   |
| Indianhead River Parcel   | Broadway        | Town          | Cons.,Comm. | 1.7   | Res.   | 36   |
| Riverside   | Cons. Land      | Town          | Cons.,Comm. | 0.5   | Res.   | 38   |
| Fall, Hill  | Broadway        | Town          | Cons.,Comm. | 23.65 | Res.   | 41   |
| Merr. Property  | Broadway        | Town          | Cons.,Comm. | 11.25 | Res.   | 21   |
| Tindale Road  | Broadway        | Town          | Cons.,Comm. | 5.74  | Res.   | 19   |
| Southern Land   |                 | Town          | Cons.,Comm. | 5.5   | Res.   |      |
| Unnamed   | Cross St.       | Town          | Cons.,Comm. | 4.2   | Res.   |      |
| Water St. Dam   | Water St.       | Town          | Selection   | 0.1   | Res.   |      |
| Morrill Phillips Sanctuary  | Merriv Property | Town          | Selection   | 50    | Res.   | 32   |
| Hemel   | Broadway        | Hemel         | Hemel       | 23.31 | Res.   |      |
| Lewald McEain   | Broadway        | Lewald McEain | Lewald      | 35.72 | Res.   |      |
| DESCRIPTION/COMMENTS/RESTRICTIONS   |                 |               |             |       |        |      |
| Mixed woodlands, trail system, lil. pond and future pond.                                   |                 |               |             |       |        |      |
| House lot with hickory, deciduous forest.   |                 |               |             |       |        |      |
| Dam creates future pond.  |                 |               |             |       |        |      |
| former fireworks property, Cranberry bog, white pine and wooded swamp.                      |                 |               |             |       |        |      |
| Softball, basketball, tennis, woodlands and wetlands.                                       |                 |               |             |       |        |      |
| Restricted use for water supply.  |                 |               |             |       |        |      |
| Public works garage.  |                 |               |             |       |        |      |
| Restriction under Chapter 61-forest Management Act. No public access.                       |                 |               |             |       |        |      |
| Open field, wet meadow, brook, red maple swamp.   |                 |               |             |       |        |      |
| Upland meadow.  |                 |               |             |       |        |      |
| Woods running 750' along bank of river, fishing.  |                 |               |             |       |        |      |
| Parcel consists of wetlands.  |                 |               |             |       |        |      |
| Wooded parcel abutting the Phillips Wildlife Sanctuary.                                     |                 |               |             |       |        |      |
| Pond surrounded by abandoned apple orchard, limited parking.                                |                 |               |             |       |        |      |
| also wetlands, tomato, broccoli (dison easement), open, swamp and woodlands near power line |                 |               |             |       |        |      |
| Uplands, mixed woods.   |                 |               |             |       |        |      |
| Site of destroyed dam.  |                 |               |             |       |        |      |
| Wildlife sanctuary donated to town. No fishing, hunting, fires, picnicking.                 |                 |               |             |       |        |      |
| Restriction under Chapter 61-forest Management Act. No public access.                       |                 |               |             |       |        |      |
| Restriction under Chapter 61-forest Management Act. No public access.                       |                 |               |             |       |        |      |

| TOWN OF HANOVER<br>INVENTORY OF OPEN SPACE LANDS |                             |           |                             |       |            |      | DESCRIPTION/COMMENTS/RESTRICTIONS   |
|--|-----------------------------|-----------|-----------------------------|-------|------------|------|---|
| FACEL NAME                                       | ACCESS                      | OWNERSHIP | MANAGEMENT                  | ACRES | ZONING     | MAP# |   |
| HANOVER FOUR CORNERS                             |                             |           |                             |       |            |      |   |
| Riverside Drive                                  |                             | Town      | Cons.Cons.                  | 46.3  | Res.       | 26   | Lowland along the North River. Abut's parking and canoe launch area owned by DEN. |
| Old Pond Swamp                                   | Fond St.<br>Ransom Rd.      | Town      | Cons.Cons.                  | 30.5  | Ind.       | 40   | Also in outlier protection zone. Red maple swamp bordering Third Herring Brook.   |
| Old Pond Swamp                                   | None                        | Town      | Cons.Cons.                  | 14.83 | Ind.       | 22   | Also floodplain and wetlands zones. Wet. wooded swamp near Third Herring Brook.   |
| Old Pond Swamp                                   | None                        | Town      | Cons.Cons.                  | 4     | Ind.       | 24   | Also wetlands, floodplain, residential zoning.                                    |
| Old Pond Swamp                                   | None                        | Town      | Cons.Cons.                  | 3     | Res.       | 23   | Red maple swamp, ferns, path along brook.   |
| Unroad   | Washington/<br>Columbia     | Town      | Cons.Cons.                  | 0.02  | Res.       | 27   |   |
| Luddas Ford                                      | Elio St.                    | Town      | Board of<br>Health          | 19.5  | Res.       | 25   | Fishing, walking, picnicking. Abandoned railroad ROW abut's the site.             |
| Transfer<br>Station                              | Hanover St.                 | Town      | Board of<br>Health          | 13.68 | Res., bus. |      | Transfer and recycling station for use of residents.                              |
| Broadway Wells                                   |                             | Town      | DPW                         | 83.7  | Res.       |      | Land taken for use as pollution control facility.                                 |
| Unroad   |                             | Town      | Board of<br>Health          | 22.8  | Res.       |      | Thickly wooded land with young trees.   |
| Riverside Dr.                                    | Riverside Dr., Plymouth Co. |           | Plymouth Co.<br>Cons. Dist. | 4.57  | Res.       |      | Swampland.  |
| John s Pasture                                   | Washington St.              | Town      | Seventeen                   | 4     | Res.       |      | Playing fields and playground.  |
| Silverd School                                   | Broadway                    | Town      | School Dept                 | 5.38  | School     |      | Playing area and canoe landino.   |
| Riverside Dr.                                    | Riverside Dr.               | DEN       | DEN                         | 2.71  | Res.       |      |   |



APPENDIX C  
SOCIO-ECONOMIC DATA

U.S. CENSUS OF POPULATION AND HOUSING 1980  
HANOVER AND METROPOLITAN BOSTON (SMSA)

HANOVER BOSTON SMSA

POPULATION CHARACTERISTICS

|  |            |                |
|--|------------|----------------|
| Persons  | 11,358     | 2,763,401      |
| Age  |            |                |
| Under five years, percent  | 6.7        | 5.1            |
| 18 years and over, percent                                       | 64.0       | 75.1           |
| 65 years and over, percent                                       | 5.9        | 12.5           |
| Median years   | 28.7       | 31.3           |
| Race   |            |                |
| White, percent   | 98.7       | 91.2           |
| Black, percent   | 0.5        | 5.8            |
| Other race, percent  | 0.5        | 2.9            |
| Spanish Origin\Hispanic, percent                                 | 0.6        | 2.4            |
| Minorities, percent*   | 1.8        | 10.0           |
| *Minorities include nonwhite<br>and white hispanic               |            |                |
| Houholds   | 3,160      | 990,660        |
| Persons per household  | 3.5        | 2.7            |
| Families   | 2,852      | 669,025        |
| Single-parent families with children,<br>percent of all families | 239<br>8.4 | 67,779<br>10.1 |
| Persons in group quarters, percent                               | 1.4        | 3.7            |
| Per capita income, 1979  | \$7,568    | \$8,132        |
| Household income, 1979   |            |                |
| Less than \$10,000, percent                                      | 11.0       | 26.3           |
| \$40,000 or more, percent  | 17.1       | 12.4           |
| Median   | \$26,308   | \$19,694       |

U.S. CENSUS OF POPULATION AND HOUSING 1980  
HANOVER AND METROPOLITAN BOSTON (MSA)

HANOVER BOSTON

POPULATION CHARACTERISTICS (CONTINUED)

|  |             |                |
|--|-------------|----------------|
| Family income, 1979  |             |                |
| Less than \$10,000, percent  | 7.8         | 16.            |
| \$40,000 or more, percent  | 17.4        | 16.            |
| Median   | \$27,034    | \$22,840       |
| Persons with 1979 income below poverty,<br>percent of all persons                            | 48.5<br>4.3 | 252,190<br>9.4 |
| Persons in families with 1979 income<br>below poverty (excluding house-<br>holders), percent | 30.9<br>3.9 | 117,411<br>7   |
| Enrolled in kindergarten, elementary,<br>or high school, persons 3 years<br>and over         | 3,270       | 542,270        |
| Enrolled in private schools, colleges,<br>or universities, persons 3 years<br>and over       | 453         | 222,390        |
| College graduates, percent of persons<br>25 years and over                                   | 24.5        | 22.            |
| Living in a different state in 1975,<br>percent of persons 5 years old<br>and over           | 2.2         | 7.7            |

JOURNEY-TO-WORK CHARACTERISTICS

|   |      |      |
|---|------|------|
| Workers using car, truck or van as a<br>means of transportation to work,<br>percent | 38.7 | 73.  |
| Workers carpooling as a means of<br>transportation to work, percent                 | 18.7 | 17.  |
| Travel Time to Work, mean minutes   | 27.7 | 23.8 |
| Households without a personal vehicle<br>available, percent                         | 1.7  | 20.  |
| Persons with a transportation<br>disability, percent                                | 1.8  | 4.   |

U.S. CENSUS OF POPULATION AND HOUSING 1980  
HANOVER AND METROPOLITAN BOSTON (SMSA)

|   | HANOVER | BOSTON SMSA |
|---|---------|-------------|
| EMPLOYMENT CHARACTERISTICS  |         |             |
| *Employment is reported here by place of residence                  |         |             |
| Persons 16 years and over   | 7,845   | 2,192,615   |
| Labor force participation, percent                                  | 69.4    | 64.         |
| Civilian labor force  | 5,445   | 1,399,307   |
| Unemployed, percent of civilian labor force, percent                | 3.6     | 4.5         |
| Male, percent   | 3.1     | 5.1         |
| Female, percent   | 4.2     | 2.2         |
| Unemployed in civilian labor force                                  |         |             |
| White, percent  | 3.6     | 2.7         |
| Black, percent  | 0.0     | 14.6        |
| Other races, percent  | 0.0     | 5.1         |
| Spanish origin (any race), percent                                  | 0.0     | 1.7         |
| Work disability, percent of noninstitutional persons 16 to 64 years | 5.9     | 6.8         |
| Employment by industry for persons 16 years and over                | 5,250   | 1,336,22    |
| Industry sector employment, percent                                 |         |             |
| Agriculture, forestry, fisheries, mining                            | 1.3     | 0.5         |
| Construction  | 8.5     | 4.1         |
| Manufacturing:  |         |             |
| Nondurables goods   | 6.9     | 6.4         |
| Durables goods  | 10.0    | 13.2        |
| Transportation, communication and utilities                         | 6.7     | 6.7         |
| Wholesale trade   | 3.2     | 4.2         |
| Retail trade  | 21.6    | 15.0        |
| Finance, insurance, and real estate                                 | 9       | 7.8         |
| Business and repair services  | 4.9     | 5.1         |
| Personal, entertainment, and recreation service                     | 2.4     | 3.5         |
| Professional and related services:                                  |         |             |
| Health services   | 6.2     | 10.4        |
| Educational services  | 11.8    | 11.0        |
| Other professional & related services                               | 4.1     | 5.9         |
| Public administration   | 3.3     | 5.9         |



U.S. CENSUS OF POPULATION AND HOUSING 1980  
HANOVER AND METROPOLITAN BOSTON (SMSA)

| EMPLOYMENT CHARACTERISTICS (CONTINUED)   | HANOVER  | BOSTON | SMSA     |
|--|----------|--------|----------|
| Persons employed in executive, administrative, and managerial positions, percent | 13.4     |        | 2.4      |
| Persons employed in service positions except protective and household, percent   | 10.1     |        | 0.7      |
| HOUSING CHARACTERISTICS  |          |        |          |
| Total Housing  | 3,218    | 1,043  | 75       |
| *Total housing units includes seasonal and vacant units                          |          |        |          |
| Occupied units   | 3,160    | 990    | 100      |
| Owner, percent   | 91.9     |        | 80.2     |
| Renter, percent  | 8.1      |        | 19.8     |
| Occupied units lacking complete plumbing for exclusive use, percent              | 0.3      |        | .4       |
| Occupied units with 1.01 or more persons per room, percent                       | 1.6      |        | 2.7      |
| Value of owner-occupied units  |          |        |          |
| Less than \$30,000, percent  | 4.0      |        | 5.3      |
| \$30,000 or more, percent  | 60.2     |        | 48.2     |
| Median   | \$39,500 |        | \$38,700 |
| Contract rent, renter-occupied units   |          |        |          |
| Less than \$100, percent   | 1.2      |        | 10.8     |
| \$300 and more   | 38.3     |        | 16.8     |
| Median   | \$245    |        | \$225    |
| Total housing units vacant   | 58       | 47     | 479      |
| For sale only  | 11       |        | 4,505    |
| For rent   | 0        |        | 23,411   |
| Held for occasional use  | 12       |        | 3,431    |
| Other vacants  | 35       |        | 16,732   |

U.S. CENSUS OF POPULATION AND HOUSING 1990  
HANOVER AND METROPOLITAN BOSTON (SMSA)

HANOVER BOSTON SMSA

HOUSING CHARACTERISTICS (CONTINUED)

|  |          |           |
|--|----------|-----------|
| Housing units by units in structure                    | 3,218    | 1,038,109 |
| 1 unit, percent  | 91.0     | 46.2      |
| 2 units, percent                                       | 5.1      | 14.9      |
| 3 or 4 units, percent                                  | 2.8      | 13.7      |
| 5 or more units, percent                               | 1.1      | 24.9      |
| Mobile home or trailer, percent                        | 0.0      | 0.2       |
| Housing units with 3 or more bedrooms                  | 2,688    | 492,535   |
| Owner-occupied   | 2,573    | 389,986   |
| Renter-occupied  | 82       | 89,284    |
| Housing units in structures built before 1939, percent | 29.1     | 50.       |
| Sewerage disposal by public sewer, percent             | 3.1      | 94.0      |
| Median household income                                |          |           |
| Owners   | \$27,160 | \$25,257  |
| Renters  | \$15,100 | \$12,287  |
| Low and moderate income, household percent             |          |           |
| Median monthly owner costs                             |          |           |
| With mortgage  | \$479    | \$469     |
| Without mortgage                                       | \$248    | \$251     |
| Median gross rent*                                     | \$322    | \$281     |
| *Gross rent includes the cost of utilities             |          |           |